

5. If the Collector be satisfied that the land applied for is available for purchase and within the conditions prescribed in Rules 2 and 3, and if it have been previously surveyed and demarcated, he shall advertise the lot for sale on a given day at an upset price of not less than 2 Rupees 8 annas an acre on the whole area. The advertisement shall be published in the Collector's Office, in the Court of the Principal Judicial Officer of the District, and at the Moonsiff's Court (if there be one) and Police Station within the limits of which the lands are situated.

6. If the Collector be satisfied as above and if the land have not been surveyed, he shall cause it to be surveyed and its boundaries demarcated, the estimated cost of such survey and demarcation being first deposited by the applicant. On the completion of the Survey the advertisement of sale shall be published as above.

7. The day of sale to be named in the advertisement shall not be less than thirty days from the date of publication, and the sale shall be held at the Collector's Office. The sale may be postponed if in the Collector's judgment it be necessary, due notice being always given of the date on which the sale will be held.

8. If before the day of sale no claim of proprietary, or occupative, right in the land be preferred, the lot shall be sold by auction to the highest bidder above the upset price, or to the applicant at the upset price if there be no higher bid.

9. On payment of one-tenth of the purchase money and of all expenses of survey, demarcation, advertisement, and sale the purchaser shall receive a Deed (in a form which will hereafter be issued by the Board of Revenue) signed by the Collector, conveying to him the lot, in full hereditary and transferable proprietary right, free for ever from all demand on account of Land Revenue, but subject nevertheless to all general taxes and local rates imposed by Law, and to any other claim, whether of the Government or otherwise, that may have been or may hereafter be established in any Court of competent jurisdiction.

10. If before the day of sale a claim of proprietary or occupative right in any part of the land be preferred, the Collector shall investigate the claim, and, if satisfied that it is groundless, shall reject it and proceed with the sale.

11. If on investigation any such claim should appear to be well grounded, the Collector may either reject the application for purchase of the lands, or refer it for the orders of the Commissioner. In the former case the applicant may appeal to the Commissioner.

12. The Commissioner may direct the Collector either to reject the application, or to proceed with the sale of the land, either unreservedly on the conditions prescribed in Rule 9, or, if any claim to right of proprietorship, occupancy, or use in any part of the lands be established to the satisfaction of the Commissioner, with a special reservation of such right, or exclusive of the area in which such right exists. If the application for purchase of the land be rejected, the amount deposited as cost of Survey will be forfeited.

13. On being put in possession of the lot the purchaser shall be bound to erect as many substantial boundary marks of masonry as the Collector may think necessary.

14. If the land be purchased by any person other than the applicant, the estimated cost of

Survey deposited by the applicant shall be returned to him.

15. The purchaser may, if he choose, pay the whole of the purchase money when the lot is sold or the Deed delivered to him. Or, if he choose, he may pay a portion, not being less than 10 per cent., at the time of sale, and the remainder in instalments at any future time, not being more than ten years from the date of sale. In the latter case simple interest, at the rate of 10 per cent. a year, will be charged on the unpaid portion of the purchase money, and the whole lot will remain hypothecated as security for the full discharge of the amount, including principal and interest, and be liable to sale by order of the Collector if the said amount be not paid within the stipulated period.

16. If the purchaser fails to pay one-tenth of the purchase money and all other expenses within three months from the day of sale, the lot will be put up to sale again on the same conditions as before, and sold at the risk of the first purchaser, whose deposit will also be forfeited.

17. The upset price will be calculated on the whole area of the lot without any deduction on any account whatever. Ordinarily the upset price will be 2 Rupees 8 annas an acre; but in special cases the Collector, with the sanction of the Commissioner, may put a higher upset price on any lot, provided that the upset price of available waste lands shall in no case exceed 10 Rupees an acre.

18. If it should at any time be found that the same land has been included in more than one lot it shall be held to belong to the lot first sold, and all subsequent sales shall as regards such land become null and void. In the event of any dispute regarding the boundary of two or more adjoining lots the Collector may, on the application of any one of the parties, re-adjust the boundaries of the lots, and his decision shall be final. The price paid by any subsequent purchaser for land thus excluded from his lot will be refunded to him with simple interest at 10 per cent.

19. All grants of waste land already made for a term of years under previously existing Rules, in which no right of occupancy or proprietorship exists, except that of the grantee or that derived from him, will be treated for the purposes of this Rule as if the land were permanently settled; and the grantees or their representatives may redeem the future land revenue of such grants or of any compact part of them in perpetuity for an amount equal to the present value of all future stipulated annual payments calculated at 5 per cent. interest, provided the said amount is not less than 2 Rupees 8 annas an acre on the whole area of which the revenue is redeemed.

20. All sales of waste land and all redemptions made under these Rules in each Division will be reported immediately to the Board of Revenue in such form as the Board may direct, but no sale of waste lands once made by a Collector in conformity with these Rules will be disturbed by any higher executive authority.

21. Reserves of grazing and forest land, of land for the growth of firewood near Towns and Stations, of building sites, parks, recreation grounds, and the like, and of land required for other special purposes, are not to be sold under these Rules without the express sanction of the Government. A list of these lands is under preparation by the Board of Revenue, and when

QUESTIONS.—(Continued.)

ANSWERS.—(Continued.)

2. By the old Rules one-fourth of the whole area of a grant was permitted to be held rent-free in perpetuity as an allowance for unculturable land. I presume under the 17th Rule of the Notification no such deduction will be allowed.

3. What interpretation does the 19th Rule bear as regards holders of old grants in Bengal?

I apprehend that the redemption of the Land Revenue of such old grants will be regulated on the principle upon which deferred annuities are calculated.

Will the amount of purchase money or price of redemption be ascertained on the calculation of the interest that would accrue from the amount paid up equalling the rate of assessment during a period of twenty years? or how?

4. With reference to the 22nd Rule, How will it apply in the following cases?

In the case of all Companies or individuals who applied for the redemption of their grants under the Resolution of the 17th October 1861, whose applications were registered by the Local Authorities, and Deposits received, but subsequently returned to the applicants?

In the case of those who applied, under the Resolution of 17th October 1861, for the redemption of their grants, whose applications were registered by the Local

boundaries) will not be great; and the applicant, with the assistance of the Collector, who also must be satisfied (under Rule 6) that adverse claims do not exist, may easily ascertain whether such claims are likely to be made, and admitted, or not. It is only when an application for waste lands is *absolutely* rejected that the deposit is to be forfeited; but, under Rule 12, applications may be conditionally complied with, and the projected Law will afterwards render the sale of adverse rights compulsory.

2. No deduction will be made on account of unculturable land.

3. The redemption of future payments of revenue will be calculated precisely as an Actuary would calculate the present value of a deferred annuity with interest at 5 per cent.

Thus, if a beegah of land is held rent-free for twenty years, at 4 annas a year for the next twenty years, 8 annas a year for the next twenty years, and at 12 annas a year thereafter in perpetuity, the amount for which all future payments may be redeemed at once would be calculated thus:—

Present value at 5 per cent.			
of a deferred annuity of			
4 annas from the 21st to			
the 40th year	...	0	0 0
Ditto ditto of 8 annas from			
the 41st to the 60th year...		0	0 0
Ditto ditto of 12 annas			
from the 61st year for ever		0	0 0
Total	...	0	0 0

The amount will be found to be very small.

4. 1st Case.—Registration is enough to bring these applications under the Resolution of 17th October 1861. Return of Deposit makes no difference.

2nd Case.—The same Registration alone is sufficient.

But it will be found that the terms of redemption offered by the new Rules are more favorable generally than those given by the Resolution.

3rd Case.—Those who applied under the Resolution, but whose applications were not received or registered, have

Authorities, but whose *Deposits* tendered at the time were refused to be received?

In the case of those who applied for grants under the Resolution of the 17th October 1861, but whose applications would neither be received or registered by the Local Authorities in terms of that Resolution, and whose applications, on such refusal, were put in under the old Rules, and granted under those Rules?

no claim to receive lands under the Resolution of 17th October. The Resolution neither authorized persons to apply, nor warranted Collectors in receiving, and registering, applications, till Rules should be issued by the Local Government, and no such Rules ever were issued. Still where an applicant has been led to expect, by the act of a Collector, that his application would be complied with in the terms of the Resolution, he is not to be disappointed.

Grants under the old Rules may be commuted under Rule 19.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 8, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

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Government of India, Home Department.

Cultivation of Flax and of the Neilgherry Nettle in the Madras Presidency.

From the Right Hon'ble the Secretary of State for India, to His Excellency the Hon'ble the Governor in Council of Fort St. George,—(dated London, the 30th August 1862.)

I HAVE received and considered in Council your letter dated May 24, (No. 36,) 1862, forwarding papers respecting the cultivation of Flax in the Districts of the Madras Presidency and of the Neilgherry Nettle.

2. Flax appears to be cultivated to a very limited extent, and it is not likely that the Ryots will be induced to engage in its cultivation on a large scale. At the same time there are good grounds for the belief that private Companies or individuals might undertake the cultivation of

Flax in the Madras Presidency with as hopeful a prospect of success as in the Punjab, and it is therefore very desirable that experiments tending to demonstrate the probability of such results should receive every encouragement from your Government.

3. I have read Mr. McIvor's Report on the cultivation of the Neilgherry Nettle with much interest. There is now no doubt that this plant yields a fibre of great value. Messrs. Noble, the well known Fibre Brokers, have valued the samples of Neilgherry Nettle at £80 per ton, and they add that £60 per ton may be calculated on for this fibre for some time to come.

4. Mr. McIvor's experimental cultivation is therefore of great practical utility, tending as it does to disseminate a knowledge of the proper treatment of the plants, and of the value of the fibre amongst the Planters and other inhabitants of the Hill Districts in your Presidency.

5. I am glad to be able to add that Mr. McIvor has received a Medal from the Commissioners of the International Exhibition for his Neilgherry Nettle Fibre.



SUPPLEMENT TO The Calcutta Gazette

SATURDAY, OCTOBER 11, 1862.

OFFICIAL PAPERS.

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Government of Bengal.

Report on the Police Administration of the Town of Calcutta for the Year 1861-62.

From S. WAUCHOPE, Esq., C. B., Commissioner of Police, Calcutta, to the Secretary to the Government of Bengal,—(No. 878, dated the 6th September 1862.)

SIR,—I HAVE the honor to submit, for the consideration and orders of the Hon'ble the Lieutenant-Governor of Bengal, a detailed Statement of crime in Calcutta for the year ending 30th April 1862, embracing the results of all cases brought before the Magistrates of Calcutta by Summons as well as those in which the Police have brought up persons charged with offences, together with a Statement of crime during that year as compared with 1860-61, and beg to offer the following remarks.

2. MURDERS.—Three murders were reported to the Police during the year.

1860-61	...	5
1861-62	...	3

The first was that of a collecting Sircar named Sreenath Chatterjea, who was murdered on the evening of the 8th September in a street a little to the north of the Mint while returning home. The murder was evidently for the sake of a bag containing Rupees 500 he had

with him, which the assassins failed in carrying away, escaping, however, from the Police into dark lanes, and, as it afterwards appeared, out of the Town.

There was a large number of Natives close to the spot, but none made any attempt to seize the murderers.

The two persons concerned, named Bholanath Khettree and Gunness Abeer, were arrested in December and March, the latter in Benares; but at the trial in the Supreme Court, as the Jury considered that there was not sufficient evidence, no conviction followed. This was a most unsatisfactory case. The Chowkeedar, whose beat was at the mouth of the dark lane up which the murderers ran, had been removed on the reduction of the Police a short time previously; but the whole affair occurred in so short a space of time that it was all over before a European Inspector, who was on duty within two hundred yards, arrived at the spot. That Gunness and Bholanath were the murderers there can be no moral doubt; but after once getting clear away, I confess I had no hopes of obtaining a conviction, as it was impossible to procure evidence against them.

In the next murder Munnooh Khan, a Khalassie, in a drunken squabble, stabbed another, named Khoda Bux,

between the shoulders, causing immediate death. He was arrested, tried, and transported for life.

The third, in which Narain Doss, the Gomastah of a Shawl Merchant, was murdered by Kaleechurn Khettree, a Shawl Broker, was about the most cold-blooded murder I ever heard of. As I have given a full report of the case in my letter No. 365 of the 11th April last, to your address, I need only here state that Kaleechurn Khettree, in order to get possession of a number of Shawls, inveigled Narain Doss to a house where he had previously prepared a grave, and then murdered and buried him. In the grave a large quantity of Salt had been placed, Kaleechurn believing, as he himself informed me, that the features of his victim would thereby be quickly destroyed. The Police in this case behaved well, recovered the Shawls, and proved the murder against Kaleechurn, who was executed on the 14th April 1862.

3. MANSLAUGHTER.—Eight cases of
 1860-61 ... 7 manslaughter were
 1861-62 ... 8 reported during the
 year, in which seven persons were convicted. One of these was the Manjee of a boat bringing a Lady to Calcutta, who was drowned owing to his gross neglect and carelessness, by which the boat fouled a buoy and upset. The Manjee was sentenced to one year's imprisonment, but the boatmen, who were also committed to take their trial, were acquitted.

A Native Police-man was wounded above the eye by a piece of brick thrown at him in a disturbance. No danger was at first apprehended, but he died of tetanus caused by the injury inflicted. The person who threw the brick could not be identified.

Charles Kooray, a Serjeant of Police, while taking a Deserter from Her Majesty's 75th Regiment ashore in a Dinghee, was pushed by his Prisoner, and losing his balance fell overboard and was drowned. The Deserter jumped overboard to rescue the Police Officer and was with difficulty saved himself. He was committed to take his trial, but was acquitted.

4. I am obliged to insert in my Statement all cases in which persons are arrested; but, of the eight reported, there were three in which I can hardly say that any offence was committed. That in which the Police Serjeant referred to above was drowned is one. In another a firework-maker accidentally set fire to some composition used in his trade and blew up his two children, who died in consequence, and in a third a child was knocked over and killed by a man named Bahadoor who was driving a restive horse.

5. CUTTING AND WOUNDING.—Five
 1860-61 ... 5 cases of cutting and
 1861-62 ... 5 wounding were reported during the year: at one time this offence was very common, generally arising from drunken brawls in Punch Houses and low Coffee Shops, where the Police had no control. The best results have followed the closing all Liquor Shops at sunset, and I attribute the decrease in cutting and wounding chiefly to this as well as to the Police taking every opportunity of disarming seamen of their clasp knives and other offensive weapons. There has also been a great decrease in the number of those who are generally called "Loafers," a European population living by crime. In January 1861 I had occasion to make some enquiries regarding this class, and ascertained that there were then in Calcutta at least three hundred Europeans and Americans without ostensible means of livelihood, many of them old offenders. Of these there are not ten remaining. It is difficult to say what has become of the remainder; but I have reason to believe that a very large proportion are scattered over the North-West Provinces, the Punjab, and other parts of India, where they can make an easier and more profitable livelihood than in Calcutta, where they are well known to the Police.

6. HIGHWAY ROBBERY.—There has

	Number of Cases.	Value of Property stolen.		Value of Property recovered.	
		Rs.	As. P.	Rs.	As. P.
1860-61 ...	3	108	0 0	80	0 0
1861-62 ...	1	5	0 0	5	0 0

only been one case of highway robbery. A Soldier of Her Majesty's 75th Regiment while under the influence of

liquor broke open a box containing Official Despatches while carried across the Mydaun in the evening by a Chupprassie in the Foreign Office Department. The Soldier was immediately arrested by the Police on duty, and was sentenced to eighteen months' imprisonment with hard labor.

7. BURGLARY.—The Return of property stolen

	Number of Cases.	Value of Property stolen.		Value of Property recovered.	
		Rs.	As. P.	Rs.	As. P.
1860-61 ...	39	4,235	0 0	3,466	0 0
1861-62 ...	35	21,405	6 0	262	0 0

en and recovered in cases of burglary during the year is apparently most unsatisfactory. Nearly the whole amount, however, was stolen in the robbery on the premises of Messrs. Thacker, Spink and Company in the month of January. An entry appeared to have been effected by the removal of a pane of glass, through which a hand could be inserted and the window opened. We have by no means given up hopes of arriving at the bottom of this case, and therefore, for obvious reasons, I shall not go further into the particulars, but may say that it is very questionable if the case was one of burglary at all.

8. In the Mofussil one of the chief difficulties encountered by the Police is the reluctance of sufferers to report burglaries. In Calcutta the reverse is the case. When a person wishes to make away with property entrusted to his charge, as pawn-broker or for other purposes, he forthwith has a burglary in his house. He knocks a hole through the wall of his house and declares that the goods are gone. Some of these charges are so palpably false that there is no difficulty in proving them to be so. For instance, in one case the hole in the wall was so small that no child could be pushed through. In another the operator had evidently commenced from the inside, but coming on an unyielding piece of wood was obliged to make the hole in another place. I recollect proceeding to the house of a watchmaker in which a burglary was said to have been committed and a large number of watches made over to him for repair stolen: a large hole had been made through the

wall, but the Police Officer in charge of the case pointed out to me that a particular clock must have been removed to one side by the supposed burglar previous to his entry, and that this was impossible if the breach had been made from the outside. Eventually we recovered the watches from the place of concealment, where they had been deposited by the watchmaker.

9. The majority of the burglaries reported were of the simplest description, the entry being effected by cutting the string fastening of the mat door and a few brass vessels or silver ornaments abstracted. But there are some of the professional thieves of Calcutta who carry on their trade with an amount of skill which appears incredible. A woman was accustomed to sleep on the top of her chest locked, and the keys deposited in the recess of a wooden bed alongside. On waking one morning she found the chest opened and her property gone. At first she did not recollect having moved off the chest for a moment during the night, but at last remembered she had done so for a short period and slept on the bed in which the keys were kept. This robbery was committed by a burglar named Neemye, who, on entering the house, stole the keys from the bed, and when the woman moved off the chest opened it and decamped with the property. In another case a Shop-keeper kept his money in an iron box, which was deposited in a large wooden chest with the keys of the iron box. The wooden chest was locked, and on the top of all was placed a matress on the which shop-keeper slept. One night on waking up he thought his bed was not quite straight, and on examination found the chest on which he slept broken open and the keys of the iron box missing. He sent for the Police who, with great difficulty, forced open the box and discovered his money had been stolen, as he believed, while he slept on the chest. I afterwards ascertained that a servant, in collusion with a very celebrated burglar named Petumber Ghose, had induced the shop-keeper to go upstairs for a short time before retiring to his bed on the top of the chest, and during his absence the burglar entered and carried off the money.

10. THEFT.—The only cases of theft

	Number of Cases.	Value of Property stolen.	Value of Property recovered.
		Rs. As. P.	Rs. As. P.
1860-61	2,617	1,17,793 0 0	36,768 0 0
1861-62	2,098	1,30,520 8 5	61,971 8 5

which call for remark are those in which women of the Town were drugged and their ornaments

stolen. A person representing himself to be a wealthy Baboo, with another as his Sircar, drugged and robbed a woman in October 1861. The Police at that time could procure no trace of them. The same persons robbed another woman in January 1862. The Police were more successful in this case, traced out the offenders, and the two were convicted of both crimes.

The third case was precisely of the same description and occurred in January last. The Police with much difficulty traced out the perpetrator and arrested him in May 1862 at Serampore, and he was sentenced to transportation for seven years at the July Sessions.

11. I have good reason to believe that the offences proved against these persons were by no means the first they had committed, but that they had been concerned in many others in Calcutta and the Mofussil. And yet these ruffians produced evidence and Certificates to prove that they were men of the highest respectability and they were very probably supposed to be so. Professional murderers of women are also seldom of the lowest class. A Sircar receiving a good salary was executed not long ago for a murder of this description, and I have the most complete evidence against a Writer in an English Mercantile House for two murders of women which he committed in Calcutta. A reward of one thousand Rupees was offered at the time for his apprehension, but he has succeeded hitherto in eluding the search of the Police.

12. There is generally an annual outbreak of some particular description of theft in Calcutta. One year hackerymen steal the loads entrusted to them. In another Coolies appropriate property given to them for conveyance, and in the present year the number of domestic theft by servants has been very great, and

the Police are quite helpless in their prevention, and nearly so in their detection. The theft is generally not discovered till some time after it has occurred. The Master does not know whom to charge; and, as the Police have no power to make an arrest on their own bare suspicion, the servants have every facility to conceal the stolen property. Servants are hired without enquiry and without Certificates from their previous employers. Taking advantage of this laxity, I recollect some of our professional thieves going into service as table attendants, and the result may be imagined. One celebrated thief served as Kidmutgar in no less than seven houses under different names, and in each he succeeded in stealing a large amount of property. In not one of them did his Master know any thing of him except his assumed name. He was eventually transported.

13. Thieves also obtain employment by means of forged Certificates, and a case occurred in which the Master discovering their nature discharged the servant and wrote across the documents the word "Forgery." An action was forthwith brought by the servant against his Master in the Small Cause Court for the "wrong" done, and the latter, who thought he had done rather a laudable action, was compelled to pay the sum of 25 Rupees as compensation for the injury to the character of his servant.

14. I have referred to the false charges of burglary; but the number of false and exaggerated cases of theft is quite extraordinary. Jewellers report the theft of gold and silver given to them to make up into ornaments, pawnbrokers of valuables pledged far below their value, Masters charge their servants who have left them when long deferred hopes of pay have made their hearts sick, and faithless paramours are accused by their mistresses to force their return. In fact, the Police are continually harassed, not so much in the endeavor to recover the stolen property, as in ascertaining whether a theft has actually been committed.

15. The cases of theft in the Fort are numerous, and there are no Police in it, which causes it to be a place of refuge for many of the Calcutta

professional thieves, who have means of entry and exit over the ramparts without passing through the gates. Owing to the delay in sending information of the occurrence of offences to the Police their subsequent investigations are usually futile.

16. During the year 16,662 persons were brought up for trial by the Police and by Summons, of whom 178 were convicted, and seventy-five acquitted at the Sessions, and 9,786 convicted, and 6,148 acquitted by the Magistrates of Calcutta, 475 having been released without trial. Property valued at Rupees 1,58,699 was reported to have been robbed and stolen, of which Rupees 62,289, or nearly 40 per cent., were recovered by the Police.

17. NATIVE FESTIVALS AND PROCESSIONS.—There is little else which calls for notice in this Report. There have been no disturbances, no riots, and no resistance to the Police in the execution of their duty, and I may say that Calcutta has been in a state of profound quiet during the year. On the occasion of the Mohurram and other festivals where large crowds of people throng the streets I have prohibited the Police taking any part in the processions, as they had hitherto done, for the purpose of preserving the peace. I was of opinion that their so doing, without being of real use, gave an éclat to these festivals which was altogether inconsistent with the proper duty of Police. I have, however, had strong bodies of Police in reserve ready at hand, but their services have not been required. I have also of late declined granting passes for Musical processions on Sundays in the southern parts of the Town, for I consider that the Christian population of Calcutta are as much entitled to enjoy their Sabbath evenings in quiet as the Natives to have noisy assemblages and discordant music. No person has objected to this measure.

18. HONORARY MAGISTRATES.—The Honorary Magistrates have given much assistance in the administration of justice. They have sat regularly since September last and decided all Conservancy cases brought forward by the Municipal Officers. They have also on several

occasions taken the place of the Stipendiary Magistrates when prevented by sickness from attending to their duties, and they have heard the appeals made against the decision of the Municipal Commissioners in cases of House Assessment.

19. EXECUTIVE POLICE.—The Executive Police of Calcutta and the Suburbs under my orders consist of—

- 1 Commissioner.
- 1 Deputy Commissioner.
- 7 Superintendents of Divisions.
- 52 European Inspectors.
- 45 European Serjeants and Constables.
- 156 Native Officers.
- 2,715 Native Constables.
- 6 Mounted Police.
- 116 Manjees, Dandies, and Peons of the River Police.

The mounted Police are employed solely in the conveyance of messages. During the year very nearly seventy thousand charges, complaints, and applications were made to the Executive Police.

20. REWARDS.—Rupees 1,346 were paid by Government during the year as rewards to the Police and others who did good service or gave useful information.

21. PUNISHMENTS OF POLICE.—One European and twenty-two Native Police Officers were convicted and sentenced to imprisonment by the Magistrates. Fifteen Europeans and 104 Natives were dismissed from the Force, and 3,394 fines were inflicted by me for neglect of duty, of which forty-one were on European Officers.

22. BANK NOTES AND GOVERNMENT SECURITIES FOUND.—Valuable Securities and Bank Notes representing a sum of Rupees 67,729-12-9 were made over to the Police by various persons who had found them in the streets and public places. Owners for nearly the whole amount were found and the finders rewarded.

23. ADDITIONAL CONSTABLES' FUND.—The receipts on account of the Additional Constables' Fund paid for the use of Police in 1861-62 were Rupees 18,153.

24. POLICE SUPERANNUATION FUND.—The receipts on account of the Police

Superannuation Fund for the same period were Rupees 15,361-4-11. The payments as compensation in lieu of Pensions to Superannuated Police Officers since November 1856, when the Fund was first instituted, have been Rupees 9,591-4-0, and the balance in hand on 30th April 1862 was Rupees 64,816-10-8.

25. ACCIDENTS.—Two hundred and seventeen accidents by carriages and horses were reported to the Police during the year, from which thirteen deaths resulted; and, considering that this list includes only those in which some injury has been caused to the person, it may be imagined that those in which damage has been done to property are not few in number.

26. MORTALITY.—In the margin is noted the number of bodies of Natives burnt or buried. As observed in former years the Returns obtained cannot be regarded as correct or reliable. I, however, furnish it as reported to me.

27. FIRES.—The steps taken by the Municipal Commissioners to enforce the Law regarding the removal of inflammable

	1859-60.	1860-61.	1861-62.
Number of fires ...	41	25	5
Houses destroyed.			
Pucca ...	28	7	0
Tiled ...	263	285	7
Thatched ...	1,060	25	1
Total ...	1,351	317	11

roofs from huts in the Native parts of the Town have caused an extraordinary diminution in the number of fires. Last year I noticed a very striking reduction, and the Memorandum given in the margin shews those which occurred in the last three years. There were no Ships or Boats destroyed by fire in 1861-62.

28. CONDUCT OF POLICE.—The conduct of the Police has been, on the whole, satisfactory. I am indebted to Mr. Roberts, the Deputy Commissioner, for the assistance he has given in all matters and on all occasions. Mr. Superintendent Younan has conducted the very heavy duties of his Division excellently, and I have had reason to be pleased with the manner in which Mr. Greene has managed the Police of the

Northern Division during the year. Inspectors Boyle, Smith, Greenwood, and Graves are meritorious Officers, and have given me much satisfaction.

Resolution by the HON'BLE A. EDEN, Officiating Secretary to the Government of Bengal,—(No. 3327, dated the 24th September 1862.)

READ a letter, No. 878, dated the 6th instant, from the Commissioner of Police, Calcutta, submitting a Report on the Police Administration of the Town for the year 1861-62, together with a Statement of crime in the Town for that year and a Comparative Statement of the same for that and the previous year.

1. The results exhibited in the Report are generally satisfactory. Mr. Wauchope's remarks regarding Criminal Statistics are interesting, and the Lieutenant-Governor desires to acknowledge his able administration of the Metropolitan Police during the year under review.

2. The Lieutenant-Governor learns with much pleasure that the Honorary Magistrates have given effective assistance in the administration of justice, and desires that the thanks of Government may be communicated to those gentlemen.

3. A copy of Mr. Wauchope's remarks in paragraph 15 regarding Thefts in Fort William will be forwarded for the consideration of the General Commanding the Presidency Division with a view to the adoption of such remedial measures as may appear necessary.

4. The Lieutenant-Governor is glad to observe that the measures adopted by the Municipal Commissioners for diminishing the number of fires in the Town continue to be attended with remarkable success.

5. The Lieutenant-Governor also notices with satisfaction the testimony borne by the Commissioner to the zealous and efficient services of the Deputy Commissioner, Mr. Roberts, and of Superintendent Mr. Younan, as well as the favorable mention made of the services of the Superintendent of the Northern Division, Mr. Greene, and of Inspectors Boyle, Smith, Greenwood, and Graves.

ORDER.—Ordered, that a copy of the above Resolution be forwarded to the Commissioner of Police, Calcutta, for his information.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 15, 1862.

OFFICIAL PAPERS.

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Government of Bengal.

Infusion of the leaves of *Cinchona Succirubra* used as a Febrifuge.

From T. ANDERSON, Esq., M. D., Officiating Superintendent, Botanic Gardens, Calcutta, to H. BELL, Esq., Under-Secretary to the Government of Bengal,—(No. 13, dated the 9th September 1862.)

I HAVE the honor to report to you, for the information of the Lieutenant-Governor, that I have succeeded in forming an infusion of the leaves of *Cinchona Succirubra* from the plants of that species in the Cinchona Nursery, near Darjeeling. The leaves fell off spontaneously during the months of June and July.

I sent the infusion to Dr. Collins, Civil Surgeon of Darjeeling, with a request that he would administer the infusion to some of the Patients in the Civil Hospital.

He has just informed me that he had given the infusion in doses of one fluid ounce to the first four cases of intermittent fever that occurred, and that these Patients had been cured without any other medicine whatever.

This result proves that the infusion of the leaves of *Cinchona Succirubra* possesses some of the febrifuge properties of Cinchona; the infusion is of a dark chocolate color and is intensely bitter. I hope to be able to submit an account of the chemical analysis of this infusion by Dr. Macnamara, Chemical Examiner to Government.



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, OCTOBER 18, 1862.

OFFICIAL PAPERS.

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Government of India, Public Works Department.

Abstract Statement of Remunerative Works in Madras from 1857-58 to 1860-61.

NAME OF WORK.	YEAR.	CAPITAL.	REVENUE.				AGGREGATE FINANCIAL RESULT.	
		Present estimated Value on Works.	Net Income for the year after paying 4 per Cent. Interest on Capital.		Net Charge for the year, including payment of 4 per Cent. Interest on Capital.		Profit.	Loss.
			Amount.	Rate per cent. on Capital.	Amount.	Rate per Cent. on Capital.		
		Rs.	Rs.		Rs.		Rs.	Rs.
Godavery Anicut	1857-58	32,61,105	3,08,240	11.3	...	...	40,32,053	
	1858-59	31,73,116	0,52,705	20.6	...	...	44,80,311	
	1859-60	32,11,683	9,54,824	29.7	...	...	54,01,867	
	1860-61	32,07,372	18,06,376	56.3	...	...	71,74,256	
Kistna Anicut	1857-58	13,20,007	69,659	5.2	...	...	2,215	
	1858-59	14,25,312	69,461	4.9	...	...	52,326	
	1859-60	16,41,309	1,50,526	9.7	...	...	1,72,155	
	1860-61	16,31,721	1,27,744	7.8	...	...	2,66,208	
Tennair Anicut	1857-58	1,24,634	...	...	4,230	3.3	13,118	
	1858-59	1,29,781	8,144	6.2	...	...	...	28,738
	1859-60	1,74,548	...	...	8,387	4.8	...	30,475
	1860-61	2,19,929	...	...	10,178	4.8	...	40,653
Bachagondanahully Anicut	1857-58	...	...	...	...	...	...	...
	1858-59	11,477	...	...	466	4.0	...	6,054
	1859-60	11,964	...	...	821	6.9	...	6,875
	1860-61	11,964	985	8.4	...	...	...	5,910
Palar Anicut in Madras	1857-58	...	...	...	...	...	...	...
	1858-59	38,953	4,180	10.7	...	...	25,133	
	1859-60	39,283	5,596	14.2	...	...	30,720	
	1860-61	39,462	...	...	1,371	4.0	29,160	
Corstear Anicut	1857-58	...	...	...	...	...	...	...
	1858-59	33,111	...	...	164	5	47,506	
	1859-60	36,748	28,559	72.2	...	...	74,065	
	1860-61	36,748	...	...	2,571	7.0	71,494	
Palar Anicut in North Arcot	1857-58	5,15,977	...	...	17,010	3.2	...	30,806
	1858-59	5,29,946	...	...	12,368	2.2	...	48,536
	1859-60	5,29,946	...	...	18,830	8.4	...	67,363
	1860-61	5,43,313	...	...	17,140	3.1	...	84,506

NAME OF WORK.	YEAR.	CAPITAL.		REVENUE.				AGGREGATE FINANCIAL RESULT.	
		Present estimated Value of Works.		Net Income for the year after paying 4 per Cent. Interest on Capital.		Net Charge for the year, including payment of 4 per Cent. Interest on Capital.		Profit.	Loss.
				Amount.	Rate per Cent. on Capital.	Amount.	Rate per Cent. on Capital.		
		Rs.	Rs.			Rs.		Rs.	Rs.
Ponnie Anicut	1857-58	47,481	...	...	...	2,610	5.4	...	141
	1858-59	47,481	...	...	...	872	1.8	...	4,830
	1859-60	47,762	...	...	...	1,795	3.7	...	6,125
	1860-61	47,762	...	...	...	2,633	5.5	...	8,758
Cheyar Anicut	1857-58	12,088	...	...	...	850	7	5,782	
	1858-59	12,088	2,134	17.6	...	...	...	17,183	
	1859-60	12,088	635	5.2	...	...	...	17,818	
	1860-61	46,018	...	...	...	1,986	4.3	7,820	
Lower Coleroon Anicut in South Arcot	1857-58	1,16,469	3,84,528	287.2	...	...	...	45,60,589	
	1858-59	1,16,469	3,72,098	319.4	...	...	...	49,38,667	
	1859-60	1,16,469	3,30,158	283.4	...	...	...	52,68,845	
	1860-61	1,16,469	3,67,785	315.8	...	...	...	50,36,630	
Vellar Anicut	1857-58	82,156	61,534	74.8	...	...	...	5,28,894	
	1858-59	82,156	69,017	84.0	...	...	...	5,97,841	
	1859-60	82,156	70,348	85.6	...	...	...	6,68,189	
	1860-61	82,156	81,944	100.3	...	...	...	7,56,133	
Ragavaiyem Channel	1857-58	8,023	29,284	365.0	...	...	...	2,19,508	
	1858-59	7,443	30,012	408.2	...	...	...	2,48,940	
	1859-60	7,443	24,463	328.6	...	...	...	2,78,403	
	1860-61	7,443	30,330	407.5	...	...	...	3,03,733	
Teruvadi Anicut	1857-58	11,455	25,130	219.3	...	...	...	2,67,568	
	1858-59	11,455	24,975	218.0	...	...	...	2,62,543	
	1859-60	11,455	20,591	179.7	...	...	...	2,78,134	
	1860-61	11,455	30,403	265.4	...	...	...	3,03,537	
Vieruvandi Anicut	1857-58	13,716	1,583	11.5	...	...	...	...	916
	1858-59	13,716	1,625	11.8	...	...	...	...	3,447
	1859-60	13,716	2,531	18.4	...	...	...	...	7,771
	1860-61	13,716	4,324	31.5	...	...	...	...
Upper Coleroon Anicut in Tanjore	1857-58	2,39,866	15,93,239	664.2	...	...	...	76,96,199	
	1858-59	2,39,866	17,50,002	729.9	...	...	...	94,47,101	
	1859-60	2,39,866	5,06,101	210.9	...	...	...	90,53,263	
	1860-61	2,39,866	5,19,003	216.4	...	...	...	1,04,72,206	
Lower Coleroon Anicut in Tanjore	1857-58	2,25,190	5,802	2.6	...	...	...	1,61,111	
	1858-59	2,25,190	...	...	20,372	9.0	...	1,40,739	
	1859-60	2,25,190	...	...	2,793	1.2	...	1,37,945	
	1860-61	2,25,190	4,960	2.1	...	...	...	1,42,914	
Raniempolliam Anicut	1857-58	42,970	...	...	1,080	2.5	...	...	31,218
	1858-59	42,970	...	...	1,681	3.9	...	...	32,899
	1859-60	42,970	...	...	1,953	4.5	...	...	84,662
	1860-61	42,970	...	...	2,230	5.2	...	...	87,062
Yennamakal Dam	1857-58	28,718	258	.8	...	...	...	...	3,871
	1858-59	23,468	1,711	7.2	...	...	...	...	5,645
	1859-60	22,851	449	1.9	...	...	...	...	5,813
	1860-61	22,233	...	...	6,966	31.4	...	...	13,399
Eastern Coast Canal	1857-58	...	...	...	...	...	...	...	...
	1858-59	4,97,417	1,946	...	...	...	...	4,99,708	
	1859-60	4,97,417	...	...	7,578	1.5	...	4,32,132	
	1860-61	4,97,417	...	...	8,667	1.8	...	4,28,265	

R. STRACHEY, *Lieut.-Col., R. E.,*
Secy. to the Govt. of India, P. W. I

The 13th October 1862.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 29, 1862.

OFFICIAL PAPERS.

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Government of Bengal.

Report of the Dacca Lunatic Asylum for 1861.

From DR. J. McCLELLAND, Officiating Principal Inspector, General, Medical Department, to the HON'BLE A. EDEN, Officiating Secretary to the Government of Bengal,—(No. 284, dated the 3rd July 1862.)

IN transmitting the enclosed carefully prepared Annual Report of the Dacca Lunatic Asylum for 1861, I would very respectfully call the attention of His Honor the Lieutenant-Governor of Bengal to a few points contained in it; these are, first, the great benefit which may justly be anticipated from the additional accommodation afforded by the new Buildings lately completed, consisting of an extra Ward, a Cook-room, Bath house, and Work-shed, as well from the occupation by the Overseer of the healthy and commodious house over the gateway, commenced for him in September 1860, and finished in the corresponding month of 1861.

2. The improvement effected in the internal economy of the Asylum as regards the sleeping, bathing, and conservancy arrangements.

3. The success which has attended the use of the Dullandah scale of diet of 1859.

4. The encouraging results of the attempt to introduce education.

5. Dr. Simpson is apprehensive that, under the instructions contained in letter No. 216 of 13th September 1861, from the Junior Secretary to the Government of Bengal (which allow harmless and imbecile Lunatics to be taken charge of at home by their relatives, if the latter can afford it and prefer the arrangement to that of paying for their support in the Asylum), unfortunate objects will occasionally have no care at all taken of them. But these fears seem to be nearly groundless, such cases being specially provided for in Act XXXVI. of 1858, which empowers Magistrates to punish

severely neglect or ill-treatment of Lunatics on the part of relatives.

6. Dr. Simpson also invites special notice to a new form of Admission Roll* for Native Insanes introduced by him for the Dacca Asylum, with the permission of the

Visitors. It merely puts forward in more clear detail a demand for the information which the existing form requires to be supplied; and, as I think the new form a decided improvement upon the old one, I would strongly recommend that the sanction of Government be granted to its general substitution for the latter. As, however, it differs at first sight from the terms of the Certificate given in the Act, it might be well to add a note to the effect that the first six heads belong to the Descriptive Roll, and that the succeeding ones are merely an expansion of the 1st and 2nd Clauses of the Certificate.

From A. SIMPSON, Esq., M. D., Superintendent of the Dacca Lunatic Asylum, to W. THOMSON, Esq., M. D., Deputy Inspector-General of Hospitals, Dacca,—(dated the 25th February 1862.)

Dacca Lunatic Asylum Report for 1861.

I HAVE the honor to forward the Annual Returns of the Dacca Lunatic Asylum for the year ending 31st December 1861.

1st. *Buildings.*—The general plan and construction of the Asylum are both very defective, and could scarcely be improved without re-building the whole. A plan of the Asylum, as it now stands, since the completion of the new works, is annexed.

2nd. *Additional Accommodation.*—There are, since the additional accommodation has been finished, seven large Wards for the males and females, six smaller Wards for six patients in each, and thirty-three single Cells. The proportion of the latter is greatly too small.

The "additional" accommodation consists of a Ward for thirty patients. The work was sanctioned on 12th May 1856, but suspended in

consequence of the meeting, and has now been completed. The Ward has a verandah on each side, is well ventilated, and has a privy at one end, on the plan now sanctioned for Jails. The Ward will be used for criminal Lunatics.

This accommodation relieves the overcrowding which has existed for some years, but does not provide for any subsequent increase. Any great increase is not now likely to occur soon, as, under recent orders of the Government as per margin, greater care will be taken in the admission of Lunatics, so that none but those whom it is a public object to confine and pauper Lunatics will be admitted.

3rd. *Overseer's House*.—The Overseer's house, sanctioned by the Lieutenant-Governor on 13th August 1860, and commenced in September 1860, was finished in September 1861, and was occupied by the Overseer in October. The house is a two-storied building over the gateway of the Asylum, and will be healthy and commodious. The revised Estimate sanctioned was for Rupees 3,929. The Lunatics supplied labor for making Soorkee, the estimated value of their labor being for 1,924 ferraahs Rupees 86-6-5. In the Estimate Lunatic labor was not chargeable, so that the value could not be credited to the Labor Fund.

4th. *Cook-room*.—This Cook-house, sanctioned in 1860, has now been completed. The plan is a good one and the work well executed, and will give ample space for cooking. It has been erected near the gateway close to the Overseer's house, so that he can readily observe what is going on. In this work the Lunatics supplied labor for making 456 ferraahs of Soorkee, valued at Rupees 20-8-4. This labor was not chargeable on the Estimate, and therefore the values could not be credited to Labor Fund. The Lunatics also have made the fire-places which were not included in the Estimate. A plan of the Cook-shed will be seen in the plan of the Asylum annexed.

5th. *Bath House*.—As part of the additional accommodation a Bath house has been erected with boiler and bath, which will be most valuable addition to the Asylum.

6th. *Work-shed*.—A Work-shed on pukka pillars and tiled roof substantially made has been erected. The work was finished last month. The Shed is ninety-six feet long and thirty-two feet broad, and fifteen feet high to ridge.

The cost of the building has been paid from the profits of the Labor Fund. Rupees 700 has been already paid, the balance has not been called for, and amount is not known.

7th. *Sentry Box*.—Since the completion of the additional accommodation a Sentry Box will be necessary on the south-west corner (vide 35 ground plan of the Asylum). There was an old thatched Sentry Box at 31 on the west wall, which from time had become utterly useless, and has been renewed. This was not renewed in prospect of the additional accommodation being finished, rendering it necessary to change the position of the Keeper on guard. A plan of one has been prepared by the Executive Engineer, and will be submitted to the Visitors of the Asylum for sanction.

8th. *Control and Management of Asylum*.—The control and management of the Asylum remains, as before vested in the Visitors, under

the revised Rules of 19th July 1860, based on Act XXXVI. of 1858.

The Asylum has been visited monthly by the Visitors, and monthly Reports made through the Deputy Inspector-General of Hospitals to the Principal Inspector-General, Medical Department. These visits have been of the highest practical importance in securing the efficient management of the Asylum and shewing the beneficent care of the Government to the unfortunate objects under confinement.

9th. *Establishment of Asylum*.—The Establishment sanctioned by the Visitors on the 2nd June 1860, within the limit of that laid down in the revised Rules, has been found sufficient. Statement No. 27 shews the Establishment on 31st December. The cost is Rupees 57 per mensem less than the standard. This saving has been effected by employing Lunatics who are sufficiently tractable in domestic and other duties within the Asylum.

The employment of Convicts as Mehters, Dhobees, and Day Instructors, has been found successful. From the close contiguity of the Jail they can be made available for a longer time during the day than any I could obtain on same pay, and the Jail has been benefitted by receiving their pay at Rupees 4 per mensem.

During the year the value of convict labor paid to the Jail has been Rupees 304-13.

10th. *System of Management*.—During the past year the non-restraint system has been carried out more satisfactorily. The Overseer and Keepers now understand the beneficial effects of the system better. The most dangerous criminal Lunatic, Kishore Chunder, whose case I reported last year, continues to behave most satisfactorily, and from his acuteness in detecting peculation on the part of the cooks, &c., he has been employed as a Keeper on duty at the Cook-room. Mechanical restraint of every kind is strictly prohibited and never employed.

The only restraint employed towards the violent and mischievous during paroxysms is seclusion in one of the compartments during the day and confinement in their Cells during the night.

Locking up violent and excited patients in their Cells during the day has been found to aggravate the paroxysms; locking up by night, being usual, has not that effect. They are unrestrained in their compartment, watched by the Keeper on duty, but not unnecessarily interfered with.

As soon as the Cells are cleaned out in the morning they are locked and not allowed to be used until night, so that they are clean, and the patients compelled in a measure to breathe a purer atmosphere than that of the Cells can be.

Hypodermic Opiate injections continue to be used with marked benefit, and combined with small blisters, to the crown of the head, have been sufficient in a few days to moderate paroxysms: wire setons in the nape of the neck have also been found useful in milder paroxysms.

Under this system there has been no accident or injury of any importance. Occasionally they will quarrel among themselves, but, on the whole, such cases have been few, generally they have occurred during the night in the large Wards.

11th. *Conservancy of the Asylum*.—The conservancy is satisfactory: the whole of the night soil is removed daily in iron filth carts to a distance, and no cess-pools outside or inside the

Asylum allowed. The ground formerly used for Cess-pools has been cultivated. The Establishment of Sweepers is sufficient, and since Convicts have been employed in the in-door part of the duty the cleanliness has been greater.

The Copper Stool Pans, part of the Dullundah system of conservancy, recommended for adoption and sanctioned by the Lieutenant-Governor in 1859, have been introduced, and the amount of Estimate sanctioned has not been exceeded.

12th. *Sleeping Arrangements.*—The whole of the Lunatics sleep on wooden platforms, each six feet by two feet six inches and raised four inches on cross battens.

There can be no doubt this tends materially to their health. Thirty additional tukhtposhes have been made up and charged to the Labor Fund, so that there should always be sufficient in store. Each Lunatic has for hot weather a piece of tat and a blanket for night use, and in the cold season two blankets (one old and a new). This is both necessary and most beneficial in this climate.

In consequence of the overcrowded condition of the Asylum forty to fifty Lunatics slept at night in the verandahs, jhamps being used to protect them from the rain; sleeping on tukhtposhes and with the above bedding no injurious effects have resulted.

This was deemed more prudent than overcrowding the Wards. Now that the additional accommodation has been finished this will be no longer necessary.

13th. *Bathing.*—The Lunatics, both male and female, are bathed daily under the shower bath. In the hot weather they bathe twice, once early in the morning and again before dinner, after their work. Before the bath they are rubbed with "khullee," mustard oil cake, made into a thin paste with water. This cleanses the skin and leaves it soft and pliant. The emaciated and cachectic patients are daily rubbed with oil and have tepid water bath. The warm Bath-room has been finished, and will, from the 1st proximo, come into use. This Bath-room formed part of the additional accommodation works.

14. *Diet.*—The Dullundah scale of diet, sanctioned in 1859 by the Lieutenant-Governor, has been continued and has been found sufficient as ordinary diet. This allows a little animal food daily to every patient. Those who will eat flesh receive it on alternate days with fish; those who do not eat flesh have fish daily. The cost of the Dullundah diet scale one anna and seven pies per day. Ration has not been exceeded; extra diet articles have been included in it. The articles are supplied by contract and are of good quality, great care being taken that they are supplied in full. The contractor receives the daily indent from the Overseer, and brings the exact quantities of each article ordered, and re-weighs them before him, and at my morning visit they are laid out for my inspection. The quantities are occasionally tested and found correct.

The rations shewn to me in the morning are for the evening meal and following morning's breakfast. This enables me to see cooked as well as uncooked rations. Intermediate changes on admission or discharges are made by supplementary indent or deduction.

The accounts of diet are kept by means of Diet Books, and separate Statements of extras in strict conformity with the revised Rules on that subject.

To guard against peculation, and to see that the weak and imbecile receive their full share, require the utmost vigilance on the part of the Overseer and Jemadars. Any peculation from the rations on the part of the Keepers, and they are sometimes caught, I punish by fine.

I continue to give each Lunatic in the morning a hot cake made of soojee, ghee, and milk, weighing four ounces, and costing each about $\frac{1}{4}$ pie, or Rupee 1-2 per 100; they are much relished. One of the casualties was caused by one of these cakes; a poor, old, imbecile, paralyzed woman stuffed her mouth with more than she could swallow and was choked, dying in a few minutes before assistance could be given her.

Considering the miserable condition on which the majority are admitted, it is gratifying to see the gradual improvement of body and mind under good diet and attention to their comfort.

The new Cook-room which has been built (*vide* ground plan) will enable me to divide them into more messes, and from its position the Overseer will be better able to see what is going on.

The Lunatics assist in cooking. For the males there are two cooks entertained, but for the females there is none. They cook their own food, assisted by their attendants, and as I find it difficult to get them to do other than domestic duties, I hope I may be able now to make them assist in cooking for the whole Establishment and relieve some of the males employed.

15th. *Clothing.*—During the past year there was one issue of two suits of Cotton clothing, *viz.*, two Chudders of two and a half yards each of Manchester Sheeting, and two Dhoties of three and a half yards each of American Sheeting. The cloth was strong and good, and cost Rupees 3-14 per thirty-eight yards of Dhotie cloth, and Rupees 7-8 per thirty-eight yards of Chudder cloth. In addition to this 100 Jackets of Dasotee were made for the more tractable and charged to the Labor Fund profits.

These Jackets were for cold weather use and are most useful in protecting them, but only the more tractable will wear them. The Blanket Coats made in 1859 were taken into store and repaired and re-issued this cold season and found very serviceable; the material being good, it has lasted. At the Fair held in November 236 Blankets were purchased, so that each Lunatic can be provided with two at night. The Blankets as well as all articles of clothing are stamped (by Lunatics) and carefully mustered to prevent peculation: using only stamped clothes has enabled escaped Lunatics to be recognized and brought back.

The clothing is changed weekly, kept in repair by Lunatic labor. The clothing of the intractable and dirty patients are colored yellow.

16th. *Occupation.*—During the past year there has been a daily average of—

Sick in Hospital	19
Intractable, not working	60
Working at domestic duties	35
Working at manufactories	85
And gardening	18

The employment has consisted of oil-making, rope-making, soorkee making, basket and morah-making, carpentering, gardening, repairing clothes, jhamp-making, domestic duties, cooking, bringing water from river, keeping the grounds in order, and attendance on the sick in Hospital.

As occupation is so essential to the preservation of health, both of body and mind, and valuable in promoting the recovery of sound intellect, every effort is made to induce as many as possible to occupy themselves; the value of occupation depends greatly on its being undertaken voluntarily and with pleasure; after the habit is formed it is easy to keep it up.

Adaptation of the labor to the mental capacities and fancies of the Lunatics is far from easy. In the idiotic we have the Oil Mill which requires little teaching, and it is also occasionally used as the first step in training to habits of occupation the newly admitted and intractable Lunatics.

Regular and full work cannot be exacted from Lunatics, and they are not kept so long at work as sane individuals.

Compulsory efforts and punishment for not working have been studiously avoided, at the same time every inducement by persuasion, humouring their fancies, or granting some coveted indulgence in diet, &c., have been employed to form the habit. When this is once formed the approach of a paroxysm can often be recognized by the Lunatic ceasing to work.

Work is not carried on Sundays, but to keep them employed as much as possible, it is made a day for particularity cleaning the whole premises, overhauling the clothing, and washing the tukht-poshes with hot water, to destroy the vermin between the planks.

Lunatics with the delusion of greatness are the most difficult to induce to work, or to employ themselves usefully. Such Lunatics are classed among the intractable not working, though in other respects they are harmless and tractable.

Basket and morah-making has been continued; the work is a favourite one and is remunerative; the only drawback is that it requires the use of the Daô, a dangerous weapon. I tried a simple mechanical contrivance for cutting, so as to dispense with the Daô, but failed. They are all so expert with the instrument (their national one) that they cannot readily be made to use any substitute. Great care is taken in the selection of the Lunatics permitted to work with such instruments, and no accidents have ever occurred.

During the year I have introduced carpentering under an Instructor Carpenter. There were two Lunatics who knew the trade, and one or two more are now being taught.

A chest of Carpenter's tools have been purchased from the profits of the labor. I am thus able to make up articles for the Asylum and Mitford Hospital much cheaper than by employing Bazar labor and allowing fair remuneration of the labor. I have taken some small contracts from the Executive Engineer for Carpenters' labor, and as more are taught I shall be able to extend our operation. It will be my endeavor to teach the criminal Lunatics such work, as they must remain a much longer period after recovery in the Asylum than non-criminal patients. It is probable a forge will also be set up and such tools purchased as can be used. There are two Blacksmiths by trade (Lunatics) in the Asylum to commence with. The Superintending Engineer has sent me a good and cheap plan of one, such as used in the Regimental Workshops.

Pounding Bricks for Soorkie is a labor easily taught and profitable.

During the year the Lunatics have pounded for the Department Public Works, for the Overseer's

house, and new Cook-houses, 2,380 ferraahs of Soorkie (each ferraah weighing almost two maunds); the value of the labor, as estimated by the Executive Engineer, being Rupees 106-14-9.

In the Estimate of the above works Lunatic labor was entered as extra, and therefore the value has not been received so as to be credited to the Labor Fund.

17th. Profits of the labor of the Lunatics.—Statement No. 23 shews that during the past year the realized profits of the labor of the Lunatics have been Rupees 1,019-9-6, and adding the estimated value of their labor, Rupees 571-14-3, as per Statement No. 24, makes a total value of their labor of Rupees 1,591-7-9.

Considering the inconvenience experienced during the whole year for want of proper Work-shed, and that the Overseer, until October, was not living on the premises, his house not being finished, I consider the result as favorable, as could be anticipated.

Now that the Overseer lives on the premises, and the Work-shed has been finished, I trust the labor of the ensuing year may be more profitable.

Statement No. 23 shews that, including the balance of 1860, Rupees 2,280-14, with the amount realized during the year, Rupees 1,019-9-6, and deducting the amount expended, Rupees 1,198-6-8, there is a balance in hand of Rupees 1,082-7-3½.

In the letter marginally noted, the Lieutenant-Governor has been pleased, with the sanction of

Letter No. 397 of 17th June 1861, from Secretary to Government of Bengal, to Principal Inspector-General, Medical Department, paragraph 4.

the Secretary of State for India, to make the profits of Lunatic labor available for extra com-

forts for the Lunatics.

This will be carefully acted on as far as possible in providing extra comforts of a permanent kind, and in furnishing means for making their labor as productive as possible.

18th. Education.—During the past year the attempt to introduce education, commenced in 1860, has been continued, and the results have been sufficiently encouraging to go on. Bengallee Books, such as are used in the Schools, and also educational prints, have been purchased from the profits of the labor, and as many as have shewn a disposition to read have been encouraged, more especially after work hours. Some of the criminal Lunatics who are rational have made fair progress, and have pleasure in reading, and a few have learnt to read and write, who had no such previous knowledge. Among these is Kishore, the most dangerous Lunatic in the Asylum, and whose case was mentioned in last Report, in illustration of the effects of the non-restraint system. Little progress has been made among the imbecile and intractable patients, but by their attendance they have been kept from engaging in mischievous practices, and their minds more diverted from their morbid trains of thought.

The School Master is entertained as a Jemadar in the sanctioned Establishment and has Jemadar's pay and authority in the Asylum. He also superintends their amusements after work hours.

19th. Amusement.—Native musical instruments and games are allowed in the evening, after the evening meal, under superintendence of the School Master. No amusements are allowed during the working hours, otherwise it would be

difficult to keep them engaged in profitable occupations.

20th. Admission of Lunatics into Asylum.—Until the receipt of a letter No. 217, from the Junior Secretary to Government of Bengal, dated 18th September 1860, with annexed Extracts from Doctor Payne's Report on the Dullundah Asylum for 1860-61, Lunatics were frequently admitted, whom it was not a public object to confine. Greater discretion on the part of the Magistrates in the transmission of Lunatics to this Asylum is now exercised, and only such Lunatics whom it is a public object to confine, and such as are found wandering about without relatives, or whose relatives are not in circumstances to maintain them at home, are admitted.

Several harmless and imbecile Lunatics, whose relatives were found in circumstances sufficient to maintain them, have had the option given them of taking charge of them, or paying the amount of their dieting in the Asylum; but, with one exception, they preferred taking them to their homes, and this will, in most cases, be found to be the case. Though in circumstances to maintain them in the Asylum, unless compelled they will decline paying for their maintenance, and the unfortunate objects will have no care taken of them at their homes.

During the past year there have been ninety-five admissions, almost the same as in 1860, but the operation of the above orders will cause a great diminution in the admissions for the future, so long as they are rigidly acted on.

21st. Certificates of Insanity and Descriptive Rolls of Lunatics.—With reference to a communi-

Letter, No. 123 of 25th April 1861, from Junior Secretary to Government of Bengal, to Commissioner of Dacca, with copy of a letter, No. 2227 of 12th April 1861, from Principal Inspector-General, Medical Department.

Lunatics are sent, and drawing attention to the directions contained in Schedule appended to Act XXXVI. of 1858, that they may be complied with, I brought to the notice of the Visitors the very meagre information regarding Lunatics sent to this Asylum, and that it was difficult for the Magisterial Authorities to supply the requisite information, as the Police were not aware of the exact nature of the information required, and consequently the information given in the old Descriptive Roll, regarding the previous history and conduct of the Lunatics, was either nothing or extremely vague. I suggested the necessity of adopting a new form of Descriptive Roll, containing the exact points on which information was required regarding Lunatics, and that the Police Darogahs should be supplied by the Magistrates with a Vernacular Translation, to be carefully filled in in sending Lunatics to the Sudder Stations, to be forwarded to this Asylum. This would, if carefully attended to, enable Medical Officers to supply the information required in Schedule Form A., Section IV. of Act XXXVI. of 1858.

The Visitors, on the 8th July 1861, sanctioned the annexed Form (No. 28) of Descriptive Roll, in supersession of the old, and copies were sent to the Commissioners of the Districts from which Lunatics are sent to this Asylum, with the re-

quest that they should issue to the Magistrates of the Districts copies of the new Descriptive Roll, in English and Bengallee, with instructions that they may be strictly and carefully adhered to.

Since the adoption of this Form of Descriptive Roll more information has been obtained, but I am sorry to say that they have not been adhered to in all cases, but by taking notice of all cases where they are not attended to gradually more accurate attention will be obtained.

22nd. Forms of Insanity.—From Statement No. 8 it will be seen that of the 304 cases treated there were—

No.	7	under Acute Mania.
"	5 or 1.64	per cent under Moral Insanity.
"	10 or 3.28	" " Monomania.
"	152 or 50.00	" " Mania chronic.
"	30 or 9.86	" " Mania chronic with lucid intervals.
"	4 or 1.31	" " Mania chronic with Epilepsy.
"	87 or 28.61	" " Dementia from protracted Mania.
"	4 or 1.31	" " Congenital Dementia.
"	5 or 1.64	" " Amentia.
"	7 or 2.30	" " Dementia with Epilepsy.

These results correspond with those of the previous year.

23rd. Causes of Insanity.—Of the 304 cases of Insanity treated during the year the apparent and assigned causes have been given in Statement.

This Statement shews that No. 174 or 57.18 were referred to physical causes, No. 23 or 8.65 were referred to moral causes, No. 107 or 35.19 causes unknown. The physical causes in the order of their frequency have been Ganjah 44.73 per cent, Epilepsy 3.61, Hereditary Tendency 3.28, Opium 2.63.

The moral causes in the order of their frequency have been love 2.76, religion 2.30, loss of property, infidelity of wife, grief, jealousy.

Indulgence in Ganjah may therefore be stated to be the great cause of insanity here.

24th. Insanity with reference to Sex.—Statement No. 2 shews that during the year 241 males and sixty-three females have been treated. Of these fifty-six males have been discharged cured, and twenty-six females; ten males have died, and three females. Of the males four are criminal Lunatics, and of the females none are criminal Lunatics. As to the forms of Insanity, Statement No. 8 shews the relative proportion between males and females. The ratio of mortality among females has been 4.60, that among the males has been 4.15.

25th. Cures of Insanity.—During the past year eighty-two have been discharged cured, or transferred to friends improved, making a total of cures and transfers of 26.95 per cent on the number treated.

The standard of cure is not a high one, a lucid interval of three or four months, and in some cases shorter, where the patients have shewn no dangerous tendencies during paroxysms, have been

considered sufficient evidence of cure and fitness for discharge; but a patient, properly speaking, cannot be considered cured, merely because the mental excitement has subsided for a few months, and he no longer appears to be under the influence of hallucination or delusions.

In the case of criminal Lunatics, or Lunatics confined under orders of the Judicial Authorities on account of the commission of heinous offences, a much more prolonged period of tranquillity and freedom from mental delusions is considered necessary, and where the cause has been from intemperance, especially from indulgence in Ganjah, there is great risk in setting such men at liberty until several years of good and rational conduct has elapsed.

26th. Sickness and Mortality.—The annexed Return, No. 10, shews the diseases most prevalent among the Insanes during the past year. They have, as usual, been Fevers, Pulmonary, and Bowel Complaints.

The causes of death have been detailed in the annexed Casualty List, Appendix No. 13.

No. 1 or 7.69 per cent arose from diseases of the nervous system.

No. 2 or 15.38 per cent arose from diseases of lungs.

No. 6 or 46.14 per cent from diseases of the digestive system.

No. 2 or 15.38 per cent from cholera epidemic.

Out of 304 treated, or a daily average of 217, there have been thirteen casualties, giving a ratio of 4.27 per cent on actual strength, and 5.98 on daily average strength. This is highly satisfactory. The mean annual mortality, from 1846 to 1855, in English Public Asylums, Dr. Hood estimated at 11.36 per cent where private and pauper patients are treated, and in pauper Asylums the mortality is slightly greater.

Considering that the patients admitted into this Asylum are most frequently in a bad state of health from the combined influence of disease, poverty, and vice, a ratio of mortality under 10 per cent ought to be considered favorable.

Statement No. 10 shews the comparative mortality during the last years.

This decrease in the ratio of mortality I attribute to the improved diet and conservancy and attention to the comforts of the Lunatics.

27th. Criminal Lunatics.—The annexed Statement, No. 19, gives a list of criminal Lunatics under confinement during the year.

During the year seven have been admitted, two discharged under orders of Government, and four have died.

There are now forty males and four females under this class, and confined on account of the following criminal offences:—

For murder	...	29 males and 3 females.
For homicide	...	1 male.

Implicated in mur-

der	...	1 male.
Wounding	...	8 males.
Theft	...	1 female.
Perjury	...	1 male.

This shews that of the 304 Lunatics treated during the year fifty, or 16.44 per cent, were criminal Lunatics, and of them forty-two, or 13.81 per cent, are confined for the most heinous offences of killing and wounding.

Criminal Lunatics on recovery were formerly sent into Jail, and, after undergoing surveillance for a longer or shorter period, were released under orders of Government. The Lieutenant-Governor,

Letter, No. 307 of 17th January 1861, from the Junior Secretary to the Government of Bengal, to Principal Inspector-General, Medical Department.

in reference to my remarks regarding this class of Lunatics in my last Report, has ordered that criminal Lunatics confined during pleasure under the Law should be kept always in an Asylum and never in a Jail, and that steps would be taken to ensure this in practice.

28th. Expenditure and annual cost of each Lunatic.—Statement No. 18 shews the amount expended in keeping, dieting, and clothing the Lunatics during the year. The annual average charge incurred for each Lunatic has been Rupees 52.6-6. This is greater, as will be seen by the Statement, than in the previous years. In 1859 a European Overseer was appointed. In 1860 the Establishment was increased under the revised Rules for the management of the Native Lunatic Asylums, and the scale of Diet was also increased up to the Dullundah standard under orders of Government. Both these additions caused an increase of cost in 1860; but as they were not in force during the whole of that year the increased cost did not fully appear as it has done in 1861. During 1861 there has been no charge for extra diet or extras, and each Lunatic has had but one blanket and two suits of clothing purchased for them.

The Comparative Statement of sickness and mortality during the last seven years gives the gratifying result of a reduction of mortality from an average of 25 per cent before the introduction of the present system to six per cent.

This shews that the benevolence of Government in ameliorating the condition of the Lunatics, by more nutritious regimen and greater attention to their comforts, has been successful, and I believe as economically as possible.

29th. Conduct of Establishment.—One of the greatest difficulties to be contended with in the management of the Asylum is the difficulty of finding proper attendants. The class from which they are selected, with the exception of the Overseer and Native Doctor, is necessarily the uneducated, and consequently they cannot be expected to have much capacity for the duties required of them. Good temper and kindness of disposition have been chiefly looked to in the selection and retention of them.

The majority of the attendants are Mahomedans, but I am endeavoring, as far as possible, to introduce the same proportion of Hindoo attendants as that of the Hindoos to Mahomedan patients.

The chief fault I have had to find with the conduct of the attendants generally is their attempting to do by force or severity what kindness alone can accomplish.

The Overseer, Mr. Newing, has conducted his duties satisfactorily. He has acquired more experience in the management of the Lunatics, and by kindness and attention to their comforts and peculiarities he has gained their confidence, and many of them have become attached to him, more especially Kishore, the dangerous Lunatic, who knocked him down very soon after joining his appointment. This change has been effected entirely by kindness. He has used no coercive measures in exacting labor; on the contrary, he has been indulgent, and has still kept up a fair average in occupation.

I consider he is deserving of Commission in the Letter, No. 307 of 17th June 1861, from Junior Secretary to Government of Bengal, to the Principal Inspector-General, Medical Department. profits of the labor, which the Lieutenant-Governor, in a communication marginally noted, has been pleased to grant when his general conduct has met with full satisfaction.

With reference to the amount of these profits and the humane object for which they are applied, I would recommend his being allowed 10 per cent on the profits, viz., Rupees 102. Since he has occupied the house provided for him in the Asylum, he has been better able to exercise that continued watchfulness which is so necessary to prevent irregularities, confusion, and accidents and to secure order and comfort in the Asylum, and I have also hopes that the labor of the Lunatics may be more productive than during the past year.

Bengallee Class Native Doctor Bamachurn Bhutachargia conducted his duties satisfactorily until he resigned the services in 22nd December 1861.

30th. Conclusion.—The approbation of my services in the Asylum during 1860, conveyed through the Principal Inspector-General, Medical Department, in a communication marginally noted, has been most encouraging, at the same time it is but just to remark that the present favorable state of the Asylum is due to the liberality of Government and the efficient support I have received from yourself and the Visitors in its management.

Memorandum from Dr. J. McCLELLAND, Officiating Principal Inspector-General, Medical Department, (No. 234, dated the 12th July 1862.)

Forwarded to the Officiating Secretary to the Government of Bengal, with reference to this Office letter No. 234, dated 3rd instant.

Descriptive Roll of Insanes forwarded to the Dacca Lunatic Asylum.

Dated at

18

1st.—Name of Lunatic	...
2nd.—Names of near relatives or Members of his family	...
3rd.—Place of Residence, Village, Pergunnah, and Zillah	...
4th.—Occupation	...
5th.—Age	...
6th.—List of articles, as clothes, &c., belonging to and sent with him	...
7th.—For what reason sent to Lunatic Asylum	...
8th.—How long has the Lunatic been insane	...
9th.—Has the Lunatic's Father, Mother, or near relatives been insane	...
10th.—Is the Lunatic addicted now to Gamjah, Opium, or ardent spirits, or has been previously	...
11th.—What cause is assigned for the Lunatic's insanity	...
12th.—Has the Lunatic been bound at any time with ropes, chains, or put into stocks to prevent his injuring any one, and for what period	...
13th.—Has the Lunatic set fire to property or attempted to do so	...
14th.—Has the Lunatic killed, wounded, or beaten any one, and with what weapon	...
15th.—Has the Lunatic any particular delusion of mind	...
16th.—What has been the Lunatic's conduct during his insanity	...
Is the Lunatic abusive	...
" violent	...
" intractable	...
" irascible	...
" talkative and incoherent	...
" silent	...
" melancholic	...
" filthy in habits	...
Does the Lunatic refuse to eat or drink	...
" neglect business	...
" wander from home	...
Is the Lunatic disposed to strike	...
" to set fire to property	...
" to suicide	...
" to murder	...
" to drunkenness	...
" to debauchery	...
" to solitude	...
" to company	...
" to dress fancifully	...
" to go naked	...
17th.—Has the Lunatic had Epilepsy	...
18th.—Give any further information regarding the Lunatic you can	...

From J. D. GORDON, Esq., Officiating Junior Secretary to the Government of Bengal, to the Officiating Principal Inspector-General, Medical Department, (No. 162F., dated on board the Lieutenant-Governor's Yatch *Rholas*, the 23rd July 1862.)

I AM directed to acknowledge the receipt of your letter No. 234 of the 3rd instant, submitting the Annual Report of the Dacca Lunatic Asylum for the past year.

2. In reply, I am desired to say that the Lieutenant-Governor considers the Report to be very satisfactory, and that very beneficial results may confidently be expected to follow from Dr. Simpson's sound and intelligent treatment of the Lunatics.

3. You are requested to convey to Dr. Simpson the thanks of the Government for the able manner in which he has discharged the duties of Superintendent of this Asylum, and for his lucid Report.

4. Orders will be communicated to you hereafter on paragraphs 5 and 6 of your letter under acknowledgment.

From J. D. GORDON, Esq., Officiating Junior Secretary to the Government of Bengal, to the Officiating Principal Inspector-General, Medical Department,—(dated Bhaugulpore, the 13th October 1862.)

SINCE the issue of the orders contained in letter from this Office, No. 162T, dated the 23rd July last, I am directed to state that the Lieutenant-Governor has visited the Lunatic Asylum at Dacca, and observed with much satisfaction the admirable treatment of the Insanes by Dr. Simpson, and the excellent order and management of the Institution.

2. I am to request that you will be so good as to convey to the Visitors the thanks of Government for their attention to the Asylum. His Honor also desires me to express his satisfaction at the good conduct of the Overseer, Mr. Newing.

3. Adverting to the 5th paragraph of your letter No. 284, dated the 3rd July last, I am instructed

to state that the Lieutenant-Governor sees no reason for altering the orders dated the 13th September 1861, directing that in the case of harmless Lunatics, their relations, if in good circumstances, should be required to pay for their maintenance at the Asylum, or be left to maintain them at home.

4. With reference to paragraph 6 of your letter and to your endorsement No. 284, dated the 12th July last, relative to the new form of Descriptive Roll suggested by Dr. Simpson for the admission of Patients into the Asylum, I am desired to say that the Statement annexed to Act XXXVI. of 1858, must, the Lieutenant-Governor thinks, be adhered to, in order to give legal force to the order (Form B) to which it is appended. Any additional particulars that may be required may unobjectionably be furnished in a separate Descriptive Roll.



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, NOVEMBER 1, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.

No Official Orders or Notifications, the publication of which in the GAZETTE is required by Law, or which it has been customary to publish in the GAZETTE, will be included in the SUPPLEMENT. For such Orders and Notifications the body of the GAZETTE must be looked to as heretofore.

Government of India.

Report on the Cinchona Plantations in the Neilgherries.

Extract from a Report by MAJOR H. R. MORGAN, late
Officiating Conservator of Forests.

PARA. 44. *Conclusion.*—From the above remarks it is clear that if we obtain certain conditions the *C. Succirubra* will be a success.

I. If the mean temperature at 5,000 feet elevation on Chimborazo is nearly 61°, and the mean temperature of the Plantation at Neddiwattum is the same, then the condition of temperature is satisfactorily established, and I think I have proved that it is likely to be so.

II. If the plants at the elevation of 6,000 feet grow well then it matters not if the rain-fall is 80 or 150 inches (though, I believe, the latter is nearer the mark), and we shall have secured what is indispensable to the production of Quinine, viz., elevation.

III. The planting of trees in open tracts in the Forest is, I consider, indispensable to the production of healthy bark; indeed, no one conversant with first principles could argue otherwise.

IV. The success of *C. Succirubra* established that of *C. Calisaya*, *Condaminea*, *Micrantha*, *Peruviana*, &c., must follow.

V. Exception has been taken to garden cultivation for Cinchonas. I would ask why is the cinnamon tree cultivated? why the soil dug and aerated? The cinnamon tree is cultivated for its bark; the tree in dense shade and damp woods at Neddiwattum and elsewhere grows to a large size, but art, combined with nature, produces a finer article of commerce than nature alone. It is not so much the size of the tree as the amount of Alkaloid contained in the bark that we require; and to produce this we plant Cinchona as we would coffee, tea, cinnamon or spices. I have

already shewn that the sandal tree grown in shady moist ravines produces no fine scented heart-wood; but grown in the open the heart-wood is very superior. The like successful result will take place if the Cinchona is properly treated.

VI. From Mr. Cross' Report just received, it is very satisfactory to know that he approves of the sites selected on these Hills, more especially as he is the only practical man who has examined the sites, here and those on the Andes, where the best varieties of Cinchonas grow.

45. *Nursery at Neddiwattum.*—On the 30th of April last I inspected the Cinchona sites at Neddiwattum; the plants in the nursery, at an elevation of 5,400 feet, were looking remarkably well, and are from 12 to 15 inches in height; they consist of 500 *C. Succirubra*, *Micrantha*, and *Peruviana*. At present only four beds are filled, but shortly some fifty beds capable of holding about 50,000 plants will be ready. The site of the nursery is well chosen, the soil is a rich brown loam, and the aspect is north. Some 3,000 plants have since been sent out.

46. *Upper Plantation.*—Seventy acres have been felled and burnt, and about 5,000 running feet of trenches 2' x 1½' have been dug. It will be advisable to have catch drains with silt traps on both faces of the Plantation, otherwise the rush of the storm waters will infallibly denude the Plantation of the whole of the surface soil. As the sides of the ravine in which the Plantation is situated are rather steep it will be necessary to have one trench in ten open to serve as a catch drain with silt traps at one hundred feet intervals; the traps may be 10' x 4' x 4'; when filled the contents should at once be removed and spread round the roots of the trees; in this manner an efficient system of manuring can be kept up. Mr. Melvor has very properly dug his trenches at right angles to the slope of the Hill; this method will greatly prevent a rush of water. From an acre of cleared land on a steep slope I have taken, after a heavy shower, as much as three cubic yards of silt.

47. *Elevation*.—The greatest elevation of this Plantation is 5,900 feet, it faces the north; the surface soil is excellent; the sub-soil consists of decomposing gneiss boulders.

48. *Plants*.—I examined some plants of *C. Succirubra* and others which had been put out in November last; all that I saw were healthy, and one *Succirubra*, reported to be 9' when planted out, is now twenty-five inches in height and very healthy; this is encouraging when it is considered that the plants were delicate when first put out, and have only just weathered the most unfavorable part of the year, and at an elevation of 5,900 feet.

49. *Overseers' Houses*.—Very little has yet been done for the Overseers' houses; want of labor has been Mr. McIvor's great difficulty; bricks are ready, a site prepared, and a branch road made. It would have tended to expedite the building of these houses if they had been made over to the Department Public Works as they had labor on the spot; in fact had just repaired the public bungalow. Instead of tiles it would be well if galvanised iron was substituted, as, unless the tiles are dipped in coal tar, they soon accumulate moss in this damp climate.

50. *Cooly Lines and Store-house*.—A small thatched hut for the Overseer in charge of the Nursery is finished, a temporary Store-house and Cooly Lines have been run up, but it is very important that, as soon as possible, substantial brick in mud lines be built otherwise, from being badly housed, the Coolies may get sick and leave. The Store-house for grain should be of brick in chunam with asphalted floor.

51. *Glass-house*.—A glass-house for the propagation of the plants is much required; at present the cost of carriage cannot be under half an anna a plant, or on a hundred thousand it will amount to 3,000 Rupees, enough to build two glass-houses. There is also some risk of damage to the plants in their carriage from Ootacamund to this; the plants can also be propagated more quickly under glass than in the nursery, and will be less liable to damage from hail, &c.

52. *Fencing*.—The best fence for the Plantation would be a ditch three feet wide at top, and one at bottom, and three feet deep, with a stout fence on the top four feet high; this would last for years and be cheaper than any thing I know. A wall was proposed but it would take too long to build and be very expensive; a wall six feet high of brick in mud could not be built out here under 3 Rupees the running yard, then 100 acres require 3,000 running yards or 9,000 Rupees, whereas a ditch 3' x 3' x 2' would cost per running yard 2 annas, and 2 annas for the fence, equal 4 annas, or Rupees 720 against Rupees 9,000 for the wall. Rose cuttings may be planted on the loose soil taken out of the ditch, and before the fence decays will form an impenetrable barrier.

53. *Ootacamund Plantation*.—A sholah containing about forty acres has been partially trenched and filled, the situation is excellent, well protected, and the generality of the soil is a rich black mould. I have recommended Mr. McIvor to have catch drains and silt traps, as some of the ground is very steep. Mr. McIvor has very properly trenched

nearly the whole of the ground; this I know, from practical experience, to be the best plan, as it gives the plants a start of at least two years over those in pits. I have myself tried *Eucalypti* in pits and trenches on grass land; the trees in the latter are certainly three years in advance of those in pits. The great secret is to give the plant a start the first year, after that it can take care of itself.

The trees in this Plantation have, in some places, been left, so that the effect of partial shade may be tested. Not that Mr. McIvor is not fully confident of success in following the plan of cutting away every thing, but he has determined to try both plans.

I have tried both plans with *Eucalypti* and have found the trees grew as fast again where there was no shade. In fact the shade from large trees makes the young trees tender and unhealthy.

54. *Propagating House*.—An excellent propagating house has been built by Mr. McIvor on the newest system, with bottom heat, and from this and a lower house some 12,000 plants are turned out monthly; the success in propagating the plants has been extraordinary and reflects the highest credit on Mr. McIvor's skill and perseverance, for it required no ordinary care to obtain such success as he has. The *Cinchona* plant is very delicate in its first stages, requiring immense watchfulness, but hardy enough when a year old. The lower glass-houses are full of plants in all stages, from the delicate seedling, to the large plants brought by Mr. Cross, two of which will probably seed next year.

55. *Seeds*.—Seeds of the *C. Condaminea* have lately been received from Mr. Cross, and have germinated with hardly a failure; they are now coming up by thousands; this plant is eminently suited for the Dodabetta site. A variety, *C. Cres-pilla*, which, curiously enough, Mr. Cross found on mountains with peaty soil, is also germinating, and will apparently suit our black peaty soil which abounds in many parts of the grass land of these Hills.

56. *Trees planted out in the Ootacamund Garden*.—Mr. McIvor, as an experiment, put out last September six *Succirubra* plants; they have not grown much as the season has been unfavorable, but they are now beginning to push their leaves under the influence of the prevailing showers; they are perfectly healthy and will soon increase in size; the large leaves suffered a little from the unprecedented violent hail storms; the general health of the plant was uninjured.

57. *Overseers' Houses, &c.*—An excellent Bungalow adjoining the propagating house has been built by Mr. McIvor for the Overseer in charge, and a Bungalow for the Overseer in charge of the upper Plantation is nearly finished, as also substantial buildings for his Gardeners.

Number of Plants.—There are 1,200 large plants, from which small plants are constantly being propagated, the rest consist of seedlings and rooted cuttings. A memorandum of the plants furnished by Mr. McIvor is appended. The total number is 81,495.

Report on the Number and Condition of the Cinchona Plants in cultivation on the Neilgherries on the 30th April 1862.

BOTANICAL NAMES.	Commercial Names.	Number of Plants.	Value in the London Market per lb. of dry Bark.
			s. d. s. d.
1. Cinchona Succirubra ...	Red bark ...	14,450	2 8 to 8 9
2. " Calisaya ...	Yellow bark ...	237	2 10 to 7 0
3. " Condaminia var Uritusinga ...	Original Loxa bark ...	1	2 10 to 7 0
4. " Condaminia var Chahuarguera ...	Rusty Crown bark ...	8,000	2 10 to 7 0
5. " Condaminia var Cresquilla ...	Fine Brown bark ...	105	2 10 to 6 0
6. " Lancifolia from Java ...	Crown bark ...	1	1 8 to 2 10
7. " Nitida ...	Genuine Grey bark ...	2,822	1 8 to 2 9
8. " Species without name ...	Fine Grey bark ...	1,211	1 8 to 2 10
9. " Micrantha ...	Grey bark ...	3,788	1 8 to 2 9
10. " Peruviana ...	Finest Grey bark ...	357	1 8 to 2 10
11. " Pahudiana from Java ...	Unknown ...	425	Worthless.
	Total number of Plants ...	31,493	

REMARKS.—The whole of the plants are in the finest possible state of health, with the exception of *C. Lancifolia* and *C. Chahuarguera*. Our plants in the open air, within the last two months in rapidity of growth, general health, and luxuriance, having much exceeded those in our glass-houses.
The *C. Lancifolia*, lately imported from Java, being affected by fungi at the roots, it is doubtful if we

will be able to save it, as several cuttings of this sort, although successfully rooted, the fungi, which apparently spreads along the pith, has attacked these rooted cuttings and killed them. The *C. Chahuarguera*, only lately imported, has suffered much during the voyage, the whole of the leaves and part of the young shoots having been dried up, still, as it seems not to have contracted any disease, I hope it will recover.

In the portion of our Nurseries under the protection of the shade of living trees, layers made in this position on the 3rd of January were found not to have rooted on the 27th of April, while layers made at the same time in the open sunshine were found rooted by the end of the same month or in twenty-eight days. The growth under the shade has also been unsatisfactory, not having, in any case, exceeded four inches in the last two months, while in the same period many hundreds of the plants in the open ground have grown from twelve to sixteen inches. Nothing can exceed the luxuriance and bright healthy look of the leaves in the open sunshine, while the leaves on the plants under the shade are pale and covered with small hairs.

The six plants were placed out on the highest and coldest part of the Nediwattum site at the end of September 1861, their height being as follows.—

Height when planted out 29th Sept. 1861.		Height on the 14th May 1862.
No. 1. C. Succirubra red bark, 9 inches...		2 feet 5 inches.
" 2. " " " " " "		2 " 3 "
" 3. C. Micrantha 3½ " "		1 " 4 "
" 4. " " " " " "		1 " 4 "
" 5. C. Nitida 3½ " "		1 " 7 "
" 6. " " " " " "		1 " 6 "

Government of India, Public Works Department.

Progress Report of Plate-laying in Agra and Benares Districts for the Month of September 1862.

EAST INDIAN RAILWAY, NORTH-WESTERN PROVINCES.

AGRA DISTRICT, MAIN LINE B.

Progress Report of Plate-laying for the Month ending 30th September 1862.

STATIONS.	Total distance, Miles.	Linked in Miles.	Completed, Miles.	REMARKS.
Junction to Burhun Station ...	8-87	8-87	8-87	
Burhun Station to Julesure Road, &c. ...	8-14	8-14	8-14	
Julesure Road Station to Hatrass Road	12-40	12-40	12-40	
Hatrass Road Station to Palee Station ..	10-10	55	30	Stopped by want of Sleepers.
Palee Station to end of District ..	4-89	.....	....
	44-40	29-96	29-71	
Sidings ..	2-05	30	30	No points and crossings.
Total ...	48-45	30-26	30-01	



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, NOVEMBER 8, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.

No Official Orders or Notifications, the publication of which in the GAZETTE is required by Law, or which it has been customary to publish in the GAZETTE, will be included in the SUPPLEMENT. For such Orders and Notifications the body of the GAZETTE must be looked to as heretofore.

Government of India.

Abstract of the Proceedings of the Council of the Governor-General of India assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., C. 67.

The Council met at Government House on Wednesday, the 5th November 1862.

PRESENT:

His Excellency the Viceroy and Governor-General of India, *presiding*.

His Honor the Lieutenant-Governor of Bengal.

Major-General the Hon'ble Sir R. Napier, K. C. B.

The Hon'ble H. B. Harington.

The Hon'ble W. Grey.

The Hon'ble C. J. Erskine.

The Hon'ble R. S. Ellis, C. B.

The Hon'ble W. S. Fitzwilliam.

The Hon'ble D. Cowie.

The Hon'ble Rajah Deo Narain Sing Bahadoor.

The Hon'ble Rajah Dinkar Rao Rugonauth Moontazim Bahadoor.

The Hon'ble MR. ELLIS took the Oath of Allegiance, and the Oath that he would faithfully discharge the duty of his office.

SUBORDINATE MEDICAL OFFICERS' WIDOWS' AND ORPHANS' FUNDS.

His Honor the LIEUTENANT-GOVERNOR presented the Report of the Select Committee on the Bill to provide for the dissolution of the Subordinate Medical Officers' Widows' and Orphans' Fund, and the distribution of the funds belonging thereto.

CONSOLIDATED CUSTOMS BILL.

The Hon'ble MR. ERSKINE presented the Report of the Select Committee on the Bill for the Consolidation and Amendment of the Law relating to Customs Duties.

CUSTOMS DUTIES.

The Hon'ble MR. HARRINGTON moved for leave to bring in a Bill to amend Act XI. of 1862 (to amend the Duties of Customs on Goods imported and exported by Sea). He said that the Bill proposed three amendments in Schedule A of the Act mentioned. None of the proposed amendments were comparatively of very great or general importance, though they would affect a large number of persons. The first amendment proposed was in Article 18 of the Schedule relating to Machinery. Previously to the passing of Act VII. of 1859, Machinery of all kinds imported by Sea into the Presidencies of Bengal and Madras was liable to a Duty of $3\frac{1}{2}$ per cent. when imported on British Bottoms, and of 7 per cent. when imported on Foreign Bottoms. The same Duties were chargeable at Bombay until the enactment of Act I. of 1852. Under the two Acts just mentioned Machinery imported for the improvement of the communications and the development of the resources of the country was allowed to be admitted free of Duty, and by Act X. of 1860 the exemption was extended to Machinery of all kinds. The same general exemption was contained in Act XI. of 1861 which now regulated the rates of Duties on Goods imported or exported by Sea throughout the British Territories in India. It was considered that the latter enactments had carried the exemption from Duty beyond what was requisite or proper, and that they involved an unnecessary sacrifice of Customs Revenue. Under Article 18, as it now stood, it was obvious that many articles included under the head of Machinery might be admitted free of Duty, for the exemption of which no special or adequate ground existed. It was proposed therefore to revert to the Rule in force before the passing of Act X. of 1860, and to confine the exemption from Duty to Machinery used exclusively for purposes of agriculture, navigation, mining, or manufacture, or for Railway purposes, and materials

forming necessary component parts of such Machinery. The latter part of the Article, amended as proposed, appeared to be a proper concession in favor of component parts of Machinery used exclusively for the purposes mentioned in the former part of the Article. The Bill also proposed a slight alteration in the Note to Article 18 in order to give the Local Governments, acting under the general instructions of the Government of India, authority to control the Head Officers of their respective Customs Houses in construing the Article in question. A similar provision was contained in the new Customs Bill as regarded the administration of the Department generally, and there seemed no doubt that the provision would conduce to the convenience of the public, while it left full power in the hands of the Government of India to issue such instructions as it might consider necessary for the protection of the Customs Revenue, and for maintaining uniformity of practice in the several Presidencies.

The next alteration proposed was in Article 23 of the Schedule which related to the Duty on Spirits. Under that Article methylated Spirits, or Spirits used exclusively in Arts or Manufactures, or in Chemistry, were liable, on importation by Sea, to the same Duty as Spirits intended for human consumption as a beverage. It was considered that, with a view to the promotion of Arts and Manufactures, a distinction should be made between Spirits used for the purposes thereof and Spirits used for other purposes. Spirits of Wine, under certain restrictions, were allowed to be used duty free in the United Kingdom, and when the Bill to amend the Law relating to the Abkaree Revenue of Bengal was before the late Legislative Council, a Section was proposed, the object of which was to place the Law in India on the same footing, in this respect, as the Law at home, but the proposition was opposed on two grounds. The first ground was that the state of the Finances at the time would not admit of the Government giving up any source of Revenue, and that, while they were imposing new Taxes which would bear heavily on the poorer and lower classes, they ought not to remit any existing Tax, however wise it might be on principle to do so. The second ground was that no proper means existed in this country to prevent frauds on the Revenue. With regard to the first of these grounds, the improvement which had since taken place in the state of the Finances had happily enabled the Government to remove the Taxes alluded to as affecting the poorer and lower classes, and financial considerations no longer appeared to offer any obstacle to granting some remission of Duty, which had again been asked for, in favor of Spirits used in Manufactures and Arts, or in Chemistry. The Lieutenant-Governor of Bengal supported the recommendation of the Board of Revenue at Calcutta for a reduction of the present Duty on methylated Spirits, and these Authorities seemed to anticipate no difficulty in adopting measures which would prevent any abuses from taking place consequent on an alteration of the Law. It was not proposed, however, to admit methylated Spirits free of Duty. What was proposed was that such Spirits should on importation be charged with an *ad valorem* Duty at the rate of 10 per cent., and that the importation should take place subject to such rules as the Government should, from time to time, prescribe, for ascertaining that the Spirits were unfit for use as a beverage, and incapable

of being converted to that purpose. Spirits distilled in the country, and which might be intended to be used in Arts or Manufactures, or in Chemistry, would be dealt with separately.

The third and last alteration proposed in the Schedule was the addition of an Article to exempt Fire-wood, when imported by Sea, from the payment of Duty, thereby placing Fire-wood on the same footing as Coke and Coal, which were admitted free of Duty. Owing to the large consumption on the Railways and other causes Fire-wood had risen greatly in price, and in some parts of the country it was becoming very scarce. It was desirable to encourage its importation as much as possible, but the present high Duty was found to operate as a serious impediment. The amount of Customs Revenue realized on this article was very trifling, and on financial grounds there was no object in retaining the duty.

The Motion was put and agreed to.

CIVIL PROCEDURE, &c., (BRITISH BURMAH.)

The Hon'ble MR. HARRINGTON moved for leave to bring in a Bill to define the jurisdiction, and to regulate the Procedure of the Courts of Civil Judicature in British Burmah, and to provide for the extension of certain Acts to the said Territory. He said that the Bill, while it maintained all the existing classes of Courts in British Burmah, defined the jurisdiction to be exercised by each class of those Courts, and laid down rules for the admission of Regular as well as Second and Special Appeals, which, it was considered, would greatly improve the administration of Civil Justice in that branch of the Department. Special Appeals would be admissible on the same grounds as in the Regulation Provinces, *viz.*, on the ground of the decision of the Court below being contrary to some law or usage having the force of law, or of a substantial error or defect in law, or in the procedure or investigation of the case which might have produced error or defect in the decision of the case upon the merits. Special Appeals would be cognizable by the Chief Commissioner alone in his capacity of Judicial Commissioner or principal Civil Judge of the Province. But Divisional Commissioners would be allowed on certain conditions to admit a Second Appeal from the decisions passed in Regular Appeal by the Officers subordinate to them. No such Appeal was allowed in the Regulation Provinces; but, looking to the comparatively short period that British Burmah had been subject to British rule and to other circumstances, it was considered desirable that, for a time at least, the Appellate Authorities immediately over the District Officers should possess larger powers of interference with the decisions of their Subordinates than were exercised by the corresponding Authorities in the older Provinces. The Bill proposed to extend the Code of Civil Procedure, with some modifications, to British Burmah generally. The Code was already in force, under an order of the Supreme Government, in the entire Territory, excepting the Province of Pegu, in which the proceedings of the Civil Courts were regulated by a Code prepared by Major Sparks and bearing his name. Major Sparks' Code did not differ materially from the Code of Civil Procedure, but it was considered that there should be a uniform Code for the whole Province. The modifications now proposed did not affect the general principles of the Code, but related chiefly to the powers to be exercised, in certain matters, by the controlling Authorities,

and were considered desirable to adapt the Code to the peculiarities of the Province. It was thought that the Governor-General in Council, under the authority conveyed in one of the concluding Sections of the Code, might extend the Code, by an order in Council, to the Province of Pegu; but the Advocate-General was of opinion that as, subsequently to the passing of the Code, the Supreme Government had sanctioned the introduction of Major Sparks' Code into Pegu, and as the order passed conveying such sanction had since received the force of law by a Section in the Indian Council's Act of last year, an Act of the Legislature was necessary to repeal Major Sparks' Code, and to substitute the Code of Civil Procedure for it in Pegu. The Bill also proposed to extend to Pegu, in supersession of the Law of Limitation contained in Major Sparks' Code, the general Law of Limitation contained in Act XIV. of 1859. The opinion of the Advocate-General above referred to applied equally to the Law of Limitation contained in Major Sparks' Code. Major Sparks had proposed two slight alterations in the general Law of Limitation, of which the Chief Commissioner had approved. One of them related to claims for the partition of joint undivided Estates, and the other to Mortgages. The first alteration appeared to him (Mr. Harington) to be unnecessary, and to have been proposed under a mistaken view of the law. The other ought not, in his opinion, to be adopted. Should the Council allow the Bill to go to a Select Committee, he proposed to move that the communication received from the Chief Commissioner and Major Sparks be referred to that Committee for the purpose of considering the alterations alluded to; as also the expediency of adopting the provisions in Major Sparks' Code relating to Insolvency, which that Officer recommended to be retained. The other Acts which the Bill proposed to extend to British Burmah had been, for some time, in force in other parts of India, and had been found to work well. The Bill had been seen by the Chief Commissioner and Major Sparks, who considered it, upon the whole, admirably adapted to the existing Civil Judicial Constitution of British Burmah.

The Motion was put and agreed to.

APPEALS TO THE PRIVY COUNCIL (NON-REGULATION PROVINCES.)

The Hon'ble Mr. HARRINGTON moved for leave to bring in a Bill to regulate the admission of Appeals to Her Majesty in Council from certain judgments and orders in Provinces not subject to the General Regulations. He said that the object of this Bill was to extend to the Non-Regulation Provinces the Rules now generally in force in the Regulation Provinces, relating to the admission of Appeals to Her Majesty in Council, and to the execution of the decrees passed on such Appeals. The right of Her Majesty to admit Appeals from decisions passed by the Courts in the Non-Regulation Provinces, equally with Appeals from the decisions passed by the Courts in the Regulation Provinces, was not questioned. But there was no Law authorizing the Courts in the Non-Regulation Provinces to allow or even to receive Appeals from their decisions to the Queen in Council, or, of their own authority, to transmit the records of the cases in which the Appeal was made or a translation of the papers to England. Consequently parties wishing to appeal to the Queen in Council, from decisions passed by the Courts in the Non-Regulation Provinces were compelled to prefer

their Appeals direct to the Privy Council, and an order had to be sent from home for the translation of the papers and their transmission to England. This necessarily added to the expense, and also caused delay in the hearing and decision of the Appeal. A communication had been received from the Registrar of the Privy Council, conveying the opinion of the Judicial Committee of that Council, that measures should be taken to place the prosecution of Appeals from the highest Civil Tribunals in the Non-Regulation Provinces on the same footing as Appeals to Her Majesty in Council from the Courts in the Presidencies of Bengal, Madras, and Bombay. It was in contemplation to revise the existing Rules relating to Appeals to Her Majesty in Council from the Courts in this country, and to frame a new Code of Rules to regulate such Appeals, but some time must necessarily elapse before the new Code was ready for promulgation.

The Motion was put and agreed to.

WORKS OF PUBLIC UTILITY BY PRIVATE PERSONS OR COMPANIES.

The Hon'ble Mr. HARRINGTON moved for leave to bring in a Bill to provide for taking land for works of public utility, to be constructed by private persons or Companies, and for regulating the construction and use of works on land so taken. He said that, in the early part of the year, their late lamented colleague, Mr. Ritchie, obtained leave to bring in a Bill to provide for the construction, by Companies and private persons, of Branch Railways, Iron Tram Roads, Common Roads, or Canals, as feeders to Public Railways, High Roads, Navigable Rivers or Canals. It was Mr. Ritchie's intention, to have introduced a Bill similar, so far as the details were concerned, to the Bill which was introduced, with a similar object, into the late Legislative Council, though with a somewhat wider scope. That Bill was not proceeded with in consequence of the abolition of the late Council. The Bill, framed as intended by Mr. Ritchie, having been considered by the Government in the Public Works Department, it was thought that the scope of the Bill might advantageously be extended beyond what was advised by Mr. Ritchie, and that any Bill introduced, instead of being confined in its application to Branch Railways, Iron Tram Roads, Common Roads, or Canals, as feeders to other works, might properly embrace many other works of public utility. Section II. of the Bill which he was now asking leave to introduce defined the works of public utility to which it was intended that the provisions of the Bill might be applied to the Bridges, Roads, Railroads, Tram Roads, Canals for Irrigation or Navigation, Tanks, Works for the Improvement of Rivers or Harbours, Docks, Quays, Jetties, Water-works, Gas-works, Mines, Iron or Copper-works, Drainage-works, or Electric Telegraphs, and also all works subsidiary to such works. The same Section of the Bill further gave power to the Governor-General in Council, from time to time, by a declaration to be made to that effect, and published in the *Official Gazette*, to order that any other class of works other than those named should be included among works of public utility within the Act. It might be thought that this part of the Bill went too far, but it appeared to him that the Government of India might be safely entrusted with the power proposed to be given to it, and that the public might feel satisfied that the power would be

discreetly used, and that it would only be exercised for the public benefit. It was also considered that the details of the Bill, as proposed by Mr. Ritchie, might be greatly improved, and that they should be made to assimilate more nearly to the laws of the same nature which were in force at home. These considerations had led to an entire re-modelling of the Bill. The Bill, as now framed, was, in point of fact, a new Bill, and it had been thought better therefore that, instead of introducing the Bill under the permission formerly accorded, he should ask for leave in the usual way to bring in the Bill. He believed the Bill would be found in all respects a very great improvement, both on the Bill introduced into the late Legislative Council and on the Bill proposed by Mr. Ritchie. The Bill, in its present form, appeared to him to be well adapted to the end in view, and if it should be allowed to become law, he thought it would materially promote the object contemplated in its introduction, and greatly facilitate the construction of works of public utility, such as those described in Section II. of the Bill. In framing the Bill it had to be considered whether the Bill should be of general application, *i. e.*, whether its provisions should apply to all India, or whether the application of the Bill should be confined to those parts of India for which the Council of the Governor-General alone could legislate. As a general rule he thought there could be no doubt that the Government of India should not legislate for the local Governments which had Legislative Councils of their own on any matters in respect of which those Governments were competent to legislate for themselves. The part of the Indian Council's Act of last year, which related to legislation, was evidently framed of this principle. The soundness of the principle was fully recognized by the Government of India, and it must be scarcely necessary for him to say that the Government of India could have no desire to encroach upon the functions of the local Legislatures, or in any way to interfere with the exercise by those Legislatures of the powers vested in them by the Act of Parliament just mentioned. But when a law was required for the Empire at large, and whether the law was to be the work of a single Legislature or of several distinct Legislatures, the general principles observed in framing it, and the more essential details, must be the same, he ventured to think that there must be a great public convenience in having a single law for all India passed by the Government of India which alone was competent to pass a general law, instead of two or more laws passed by different Legislatures acting independently of one another. The fact that there were at the present time two Branch Railway and other Public Works Bills pending, one before the Council of the Governor of Bombay, and the other before the Council of the Lieutenant-Governor of Bengal, the provisions of which differed little, if at all, from the Bill proposed by Mr. Ritchie, and that Mr. Ritchie considered that a Bill such as was proposed by him was all that was required for the entire country, would seem clearly to shew that the legislation needed at this time was of the general character which he had described, and that, consequently, there could be no necessity for separate Acts for the different Presidencies, or for different parts of the same Presidency.

In addition to what he had already mentioned in favor of a general Bill, such as he was now

asking leave to introduce, he might repeat what was stated by Mr. Ritchie in the remarks with which he prefaced his Motion for leave to introduce the Bill proposed by him, namely, that as a Railroad for which feeders were to be provided (and the same observation applied to Canals, High Roads, and other public works) might pass through several Districts or different Presidencies, two different Acts might be objectionable. Under these circumstances, he (Mr. Harington) hoped that, when the Government of Bombay and His Honor the Lieutenant-Governor of Bengal saw the present Bill, they would agree in considering its provisions well suited to the Territories under their Governments equally with the rest of India, and that concurring in the conclusion arrived at by the Government of India that it would be in every way more convenient and desirable that the present Bill should apply generally to all India rather than that separate Bills should be passed for the several Presidencies, they would not consider it necessary to proceed with the Bills pending before their respective Councils.

MR. ERSKINE said that he had no wish to offer the slightest opposition to this Bill, and, without expressing any opinion as to whether the Bill should or should not apply generally to all India, he should be glad if it were understood that, in assenting to the introduction of the Bill, he did not pledge himself on the question as to whether the Bill should have a larger or narrower application. One reason for hesitation would be that, if the Bill were passed by that Council and subsequently modifications for one of the Presidencies were required, they could not be made by a local Legislature.

MR. HARINGTON said there could be no doubt that every Honorable Member would be perfectly free, when the Bill was introduced, to discuss the principle of it and the expediency of legislating on the subject for all India in this Council. The present was merely a Motion for leave to bring in the Bill.

The Motion was put and agreed to.

CONFINEMENT OF PRISONERS (NATIVE STATES.)

The Hon'ble MR. HARINGTON introduced the Bill for the amendment of the Law relating to the confinement of Prisoners convicted of offences in Native States, and moved that it be referred to a Select Committee. He said that this Bill had already been published by order of the Governor-General in Council under the 18th Rule for the conduct of business in the Council. The object of the Bill was to consolidate and amend the law relating to the confinement of Prisoners convicted of offences in Native States. The laws proposed to be consolidated and amended were Act XVIII. of 1813 and Act V. of 1847. The former Act applied only to the offences of Thuggee and Dacoity, and of belonging to a gang of Thugs and Dacoits. It was considered advisable that its provisions should be extended to the crime of Satties (burning alive), and to the crime of Sumadh (burying alive); and that the Governor-General in Council should have power to extend the provisions of the Act to any other offences, its extension to which might be deemed desirable. The Bill contained provisions to that effect. The Native States in alliance with the British Government, acting in concert with the British Government, were making

efforts to suppress the inhuman and barbarous practice of burning native females alive on the death of their husbands or of those with whom they had lived as wives, and it was thought that the success of the measures which had been adopted with this view, as well as to put a stop to the practice of burying lepers alive, would be materially promoted if the persons who were convicted of the offences in question were allowed to undergo the imprisonment to which they were sentenced within the British Territories. He believed it would be found that the Bill contained ample provisions to secure that the authority which it gave should be exercised only after a full and careful investigation before a properly constituted tribunal.

The Motion was put and agreed to.

MERCHANT SEAMEN.

The Hon'ble Mr. HARRINGTON introduced the Bill to amend Act I. of 1859 (for the amendment of the Law relating to Merchant Seamen), and moved that it be referred to a Select Committee. He said that Act I. of 1859, which this Bill proposed to amend, empowered any local Government to order an investigation into the conduct of any Master or Mate to whom such Government might have granted a certificate of competency or service, if it had reasons to believe that, either from incompetency or misconduct, such Master or Mate was unfit to discharge his duties. But, as the law now stood only the local Government which granted the certificate could order such investigation, wherever the misconduct to be enquired into might have taken place. An instance had recently occurred, shewing the practical inconvenience of this restriction and the necessity that existed for some modification of the law. The Master of a vessel, holding a certificate from the Government of Bengal, took his vessel to Bombay. A complaint of misconduct having been made against the Master on his arrival at Bombay, the Government of Bombay ordered an investigation, but being advised that it had no jurisdiction, it abstained from passing any order in the case. There appeared no good reason why in such a case the local Government, within whose territories the Master or Mate complained against happened to be at the time the complaint was preferred, should not be empowered to order an investigation, and on proof of incompetency or misconduct, shewing such Master or Mate to be unfit to discharge his duties, to suspend the certificate held by him, although such certificate might have been granted by some other local Government. The object of the present Bill was to give such power. Since this Bill was published a communication had been received from the Straits Settlement, in which the Governor proposed a further amendment of Act I. of 1859. The Governor said:—"On the 14th November 1859 I submitted, for the consideration of the Legislative Council, a petition from certain native ship-owners, praying for a modification of the provisions of Act I. of 1859 in favor of small country vessels sailing from the Straits Settlement. I then pointed out the prejudicial effect upon the interests of the Petitioners likely to be occasioned by the operation of Clause 13, 'unless the coasting vessels manned by natives and employed in carrying on our trade in the Archipelago might be considered as Home Trade Ships. At present, absurd as it may appear,

"the Commander of one of these vessels may be deemed qualified to take charge of his ship from this to Kurrachee, and yet he is prohibited from retaining the command if she is ordered to make a coasting voyage along the Eastern Coast of the Malayan Peninsula, or to visit one of the neighbouring Islands only a few hours' sail from the Port." If the Council allowed the Bill to go to a Select Committee, he (Mr. Harrington) proposed to refer to the Committee the communication from the Governor of the Straits Settlement, with a view to their considering the further amendment of the law proposed therein.

The Motion was put and agreed to.

RECORDERS' AND SMALL CAUSE COURTS (BRITISH BURMAH.)

The Hon'ble Mr. HARRINGTON introduced the Bill to constitute Recorders' Courts for the Towns of Akyab, Rangoon, and Moulmein, in British Burmah, and to establish Courts of Small Causes in the said Towns, and moved that it be referred to a Select Committee. He said that this Bill had been published by order of the Governor-General in Council, under the rule for the conduct of business in the Council, to which he had referred before. The object of the Bill was to give effect to that part of the Resolution of the Government of India, dated the 31st January last, relating to the administration of British Burmah, which declared that, instead of a Judicial Commissioner for the whole Territory as had been proposed, there should be established at Rangoon and Moulmein a Court to be presided over by a Barrister or Advocate of not less than five years' standing with full powers of Civil and Criminal jurisdiction, analogous to the powers now exercised by the Recorders of Prince of Wales' Island and Singapore, with exception to the power of trying cases in which European British subjects were charged with capital offences. The Bill went somewhat beyond the Resolution, inasmuch as it empowered the Governor-General in Council to establish a similar Court to that mentioned in the Resolution at Akyab also. The Town of Akyab already possessed a very large European community, and carried on a considerable export and import trade, and although a Court, such as that proposed, might not be immediately required, there could be no doubt that at no distant date it would be wanted, and it was as well, therefore, to make provision for its establishment in the present Bill.

It was probable that for some time there would not be sufficient Civil and Criminal work to justify the appointment of a Recorder to each of the Courts, for the establishment of which provision was made in the Bill, and the Bill accordingly allowed the Governor-General in Council to appoint a single Recorder to any two or to all three of these Courts, and in order that no public inconvenience might be experienced during the absence of the Officer who might be the Recorder of more Courts than one, the Bill empowered the Government to appoint a Registrar to each Recorder's Court, who would be the chief Ministerial Officer of the Court, and, as such, would conduct the current duties, including the filing of plaints, the issue of notices to defendants, and of summonses to witnesses. The Registrars would also have the powers of Small Cause Court Judges in suits up to a certain amount, and would have power to try other suits of a small value which might be

referred to them by the Recorder. The effect of these provisions would be to relieve the Recorder of a good deal of work which might very well be performed, under his general supervision, by Officers receiving a smaller salary, and to give him time for the disposal of the more important cases brought before him; they would also afford a speedy means of obtaining redress in cases of a small amount, and generally of a simple character, which was very desirable. As already noticed, the Recorder would have no power to try Europeans charged with capital offences. These cases would continue to be committed, as at present, to the High Court at Calcutta. In all other cases occurring within the limits of his jurisdiction the Recorder would have the powers of a Sessions Judge, as defined in the Code of Criminal Procedure. There would be no appeal from his orders, but it would be in his discretion to reserve points of law for the opinion of the High Court at Calcutta, and in Criminal cases the Advocate-General might certify that, in his judgment, there was an error in the decision of a point or points of law decided by the Recorder, or that a point of law which had been decided by the Recorder should be further considered by the High Court.

The Motion was put and agreed to.

EMPLOYMENT, &c., OF PEONS IN CIVIL COURTS (N. W. P.)

The Hon'ble MR. HARRINGTON introduced the Bill to consolidate and amend the Law relating to the employment and remuneration of Peons for the service and execution of Civil Process in the Courts of the North-Western Provinces of the Presidency of Fort William in Bengal, and moved that it be referred to a Select Committee. He said that the Code of Civil Procedure declared that "every process required to be issued under the Code should be served at the expense of the party at whose instance it was issued, unless otherwise specially directed by the Court; and that the sum required to defray the costs of such service should be paid into the Court before the process was issued within a period to be fixed by the Court issuing the process." But the Code contained no rules for the appointment of the Peons of the Civil Courts, for regulating the charges for such service, or for the remuneration of the Peons employed on this duty. This Bill would amend the law which regulated the appointment and remuneration of the persons employed to serve the process of the Civil Courts so far as regarded the North-Western Provinces, leaving the other local Governments to adopt any legislation on the subject which they thought proper. Under the present Regulations the Nazirs of the Civil Courts were allowed to appropriate to their own use, in addition to any fixed salaries received by them, one-fourth of the subsistence or diet money deposited for the service or execution of every process, the remaining three-fourths being paid to the Peon employed to serve or execute the process. The provision of law under which this appropriation took place applied originally only to the Nazirs of the Zillah Courts, but it had been extended by subsequent enactments to all the subordinate Civil Courts. The effect of the provision had been not only to raise the emoluments of the Nazirs of the Civil Courts generally much beyond what, looking to the position of these Officers and the nature of their duties, might be considered an adequate

remuneration for their services and responsibilities, but frequently to give the Nazirs in the Courts of the Moonsiffs larger allowances than were received by the Moonsiffs under whom they were employed. This had led to abuses from which, there could be no doubt, the character of the Courts in which they had been practised had suffered. The Bill provided for the payment of the Nazirs by fixed salaries or by fees. It also provided that, when the Peons received fixed salaries, the sums paid into Court for the service of processes should be formed into a fund out of which the salaries of the Peons would be paid. When the Peons were remunerated by fees three-fourths of the money paid as above would be given to the Peons employed to serve the process, and the remaining one-fourth carried to the credit of Government to cover any charges to which the Government might be put in connection with the Department. Any surplus from this source, or from the fund before mentioned, would be at the disposal of the local Government, and was proposed to be applied by such Government, subject to the approval of the Governor-General in Council, to the improvement of the administration of Civil Justice in the North-Western Provinces.

The Motion was put and agreed to.

RULES FOR THE CONDUCT OF BUSINESS.

The Hon'ble MR. HARRINGTON moved that the Hon'ble Mr. Erskine be added to the Select Committee appointed to consider all proposals to alter or amend the Rules for the conduct of business.

The Motion was put and agreed to.

The Hon'ble MR. HARRINGTON moved that certain correspondence between the Secretary of State and the Government of India, relative to the Rules for the conduct of business, be referred to the said Committee, and that the Committee be requested to revise the said Rules, and to propose any modifications thereof which they might consider necessary.

The Motion was put and agreed to.

EMIGRATION (SEYCHELLES.)

The Hon'ble MR. HARRINGTON moved that the Bill relating to Emigration to the British Colonial Dependency of Seychelles be referred to a Select Committee, consisting of the Hon'ble Mr. Erskine, the Hon'ble Mr. Ellis, and the Mover, and that the Select Committee be instructed to make their Report in a fortnight.

The Motion was put and agreed to.

COURTS OF REQUESTS (STRAITS SETTLEMENTS) AND WHIPPING BILLS.

The Hon'ble MR. HARRINGTON moved that the Hon'ble Mr. Erskine and the Hon'ble Mr. Ellis be added to the Select Committee on the Bill to enlarge the jurisdiction of the Courts of Requests in the Settlement of Prince of Wales' Island, Singapore, and Malacca, and to the Select Committee on the Bill to authorize the punishment of whipping in certain cases.

The Motion was put and agreed to.

REGISTRATION OF ASSURANCES, EXECUTION OF MORTGAGE PROCEEDINGS, AND RELIGIOUS ENDOWMENTS BILLS.

The Hon'ble MR. HARRINGTON moved that the Hon'ble Mr. Ellis be added to the Select Committee on the Bill to provide for the Registration of Assurances, to the Select Committee on the Bill to extend Act XXIII. of 1840 (for executing

within the local limits of the jurisdiction of Her Majesty's Courts legal process issued by authorities in the Mofussil), and to the Select Committee on the Bill to enable the Government to divest itself of the management of Religious Endowments.

The Motion was put and agreed to.

The following Select Committees were named:—

On the Bill for the amendment of the Law relating to the confinement of Prisoners convicted of offences in Native States—the Hon'ble Messrs. Harington, Ellis, and Rajah Deo Narain Singh.

On the Bill to amend Act I. of 1859 (for the amendment of the Law relating to Merchant Seamen)—the Hon'ble Messrs. Harington, Erskine, and Fitzwilliam.

On the Bill to constitute Recorders' Courts for the Towns of Akyab, Rangoon, and Moulmein in

British Burmah, and to establish Courts of Small Causes in the said Towns—the Hon'ble Messrs. Harington, Erskine, and Ellis.

On the Bill to consolidate and amend the Law relating to the employment and remuneration of Peons for the service and execution of Civil Process in the Courts of the North-Western Provinces of the Presidency of Fort William in Bengal—the Hon'ble Messrs. Harington, Ellis, and Rajah Deo Narain Singh.

The Council adjourned.

M. WYLIE,

Deputy Secy. to the Govt. of India,

Home Department.

CALCUTTA,

The 5th November 1862. }



SUPPLEMENT TO The Calcutta Gazette

WEDNESDAY, NOVEMBER 12, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.

No Official Orders or Notifications, the publication of which in the GAZETTE is required by Law, or which it has been customary to publish in the GAZETTE, will be included in the SUPPLEMENT. For such Orders and Notifications the *File of the GAZETTE* must be looked to as heretofore.

Government of India, Public Works Department.

Light Railways.

From J. E. WILSON, Esq., Civil Engineer, to LIEUTENANT-COLONEL H. YULE, Secretary to Government of India, Public Works Department,—(Dated 8th October 1861.)

SIR,—THE accompanying letter should have been received by you more than two months since, and, to my surprise and vexation, I have only now found it amongst some of my papers, where it must have come by the carelessness of the person to whom I handed it for transmission to you.

I was at that time in the midst of handing over charge of my works, and of removing my books and papers. May I therefore be permitted to apologise for a delay which, although seemingly unaccountable to you, has been most unintentional on my part.

I send you the letter as it stands to save further delay, although there are many corrections I should wish to make; not, however, as to facts or figures.

I find that I have omitted to explain one very important item, the manner in which the capital is to be found.

The amount required is, in round numbers, Rs. 6,00,000. By the usual arrangement at home, prescribed by the "Consolidation Act," this would be composed of: Shares Rs. 4,50,000, and Debentures, at say 6 per cent., Rs. 1,50,000. My friends would be willing to take all the Debentures, and a like amount in paid-up shares.

This is an arrangement for helping weekly projects (financially) into existence that has been resorted to for a good many years at home; and there is scarcely a local or branch line, or extension made of late years, which has not been indebted for its being carried out to this arrangement.

I happen to have found amongst my papers an undertaking on the part of certain Contractors to

assist in this way the extension of a line for which I was Engineer. I beg to enclose you the letter that you may see how simply the matter is done.*

All that has now to be determined is, can the remainder of the capital, *viz.*, Rs. 3,00,000 be subscribed locally and by the general public? Probably Government would not object to the East Indian Railway giving a subscription.

Since the date of my letter, I have had my attention called to the Lucknow Railway, towards which I find about Rs. 5,00,000 have been locally subscribed.

Such a sum is of course next to useless as regards the prospects of a heavy Railway. But if a "light Railway" would be considered sufficient and Government would make the road, I could undertake to get the matter set a-going with an increase of the capital subscribed already to Rs. 7,00,000.

If Government would agree to make the road, I would be glad to go to Lucknow and see the promoters of the project.

P. S.—Mr. Grant thinks that the best trial would be a tram-road to some of the mineral beds; but I think that there would be a great difficulty in raising the capital for that.

At the same time where a tram-road is the best, and a sufficient capital forthcoming, I could get the same arrangement carried out.

I think the difficulty in tram-roads for India would be the impossibility of the waggons; I am sure no private individuals would provide such.

From J. E. WILSON, Esq., Civil Engineer, to Secretary to Government of India, Public Works Department,—(Dated 2nd August 1861.)

I beg to submit to you a few brief remarks on this subject, with reference to a proposal which I had the honor of calling your attention to on the 29th ultimo, for the establishment of a line from

* Letter not printed.

the Nulhat Station of the East Indian Railway to Jeagunge, opposite to Moorshedabad, a distance of twenty-seven miles.

I of course omit all observations as to the desirability of this and similar lines of communication, as the advantages to be derived therefrom must necessarily be better understood and appreciated by yourself than by me.

One of the first things that struck me, after I had taken charge of the works of the South Beembhoom District of this Railway, (which have been my first and only employment in the country), was the great anomaly of a first-class English Railway, capable of moving an immense traffic at a high speed, running through a country scarcely possessing a track along which the feeding traffic could come to the line.

It seemed to me that as the total traffic which warranted the establishment of such a Railway was necessarily made up of the partial traffics along the line, arising from the neighbouring country, that communications to enable those traffics to reach the various points along the line were essential and indispensable, not only to the prosperity of the Railway, but to the development of the country.

At first I merely thought of roads, and addressed the Commissioner of Burdwan* on the subject with some effect; a new road being made from the Ahmoodpoor Station to Sooree, through a populous neighbourhood, and several others projected.

When I became better acquainted with the country, and had practically experienced the great want of cattle for carriage, especially at certain seasons, as well as the miserable inefficient state of such cattle as there are, I began to doubt very much whether, with the communications, would not be equally necessary a power to propel the traffic. Such being obtained, the traffic might be carried on with regularity and facility, and the cattle be left to their more legitimate, agricultural labor.

I did not at first think of a Railway of any description as the means of effecting these desired communications. My English education had shewn me nothing between the common tramway used for little else than mining purposes, and the branch Railway, which, made on the same system as the main lines, costs nearly as much; while the performances of steam carriages upon common roads are only yet experimental, and every Engineer who has given the subject serious consideration must be convinced that such engines can never become anything beyond mere agricultural and local aids.

I remembered, however, that the Liverpool and Manchester Railway was a much lighter Railway in the commencement than it is now; that America could not have developed her thousands of miles of lines with such rapidity if she had not materially lightened the English system; that nearer home, Belgium had been able, by a reduction in weight, and consequently in first cost, to construct a net-work of lines that have been the making of the country; that France has added to her main lines secondary and tertiary systems to suit the traffic that may be calculated upon, and has also tried what may be termed a fourth system consisting of rails laid down on one side of the public road.

I considered it therefore not only desirable, but important, as well as interesting, from a profes-

sional point of view to examine into the question; to see how light, consistently with practicability, a Railway might be made, suitable to the subsidiary traffic of the country; and to see what probability the reduced cost of establishing such a system would have of even a trial.

A Railway system, however light, must consist of rails, wheeled carriages, and engines. It is therefore simply a reduction in the weight, and consequently in the prime cost of each of these items that can be made in the present system. To speculate upon, or even design improvements, which doubtless can be made in the existing system, as well as the reduction of weight, would only be to encumber the question with another element of difficulty.

The prime element in the reduction is of course a diminished speed. I should not presume to attempt to explain this to you, although at the same time I must say that it is only those brought up on Railways that can fully appreciate the great, the inordinate sacrifices that are caused by a high speed. A simple illustration of this, and pertinent to the subject, occurred to me the other day, while travelling from Burdwan to Pundooah. About seven miles from the latter place, we met with a Goods Train which had come to a standstill before us, and the Driver of which, from some cause, had put out his fire. There was nothing for it but for us to push the other Train before us into Pundooah, and this we did at about twelve miles an hour instead of thirty; the loads moved by our engine in the two cases being—

Our Train, thirteen Carriages and Break Van, say	... 105 tons.
Goods Train, thirty-two loaded Waggon and Break Van	... 330 tons.
Engine of ditto, say	... 50 "
Altogether	... 485 tons.

or upwards of four and a half times the load, at two-fifths of the speed=4.6 load to 0.4 of speed.

Now the locomotive would work with efficiency down to twelve miles an hour, but there would not only be no advantage in reducing the rate below this, but a disadvantage. This rate also is one which would try the rails, wheels, bearings, and so on, scarcely more than eight, or even six miles an hour.

I therefore adopt this rate, or ten miles an hour over all, as the basis of the light Railway system. I am sure that no objection will be raised to that speed as insufficient, for, I apprehend, for the object in view, facility, regularity, and certainty of communication are of more importance than speed.

From the example that I have deduced above, (and I omitted to mention that the engine was only a tank engine drawing much less than a goods engine), you will perceive that an ordinary engine will draw upwards of 500 tons besides its own weight, at the reduced rate of speed.

But of course where a light Railway is applicable, no such Train load would ever be required, and from going into the subject I find that a maximum of 50 tons will meet every requirement. When the traffic becomes greater than this arrangement will supply, it is then time to set about making the light Railway into a heavy one.

Very fortunately this enables us to diminish the size of the engines, and consequently the weight

of the rails and of the waggons. But independently of this, the more reduction in speed warrants, alone a considerable reduction in dimensions, and consequently in weight.

Happily we by no means require to have recourse to troublesome calculations, or even mere comparisons and reductions therefrom, for the purpose of determining the size of engine necessary, the breadth of gauge, and the weight of rail, all of which are mutually dependent one upon the other.

When the Liverpool and Manchester Railway was first started, George Stephenson's famous engine, the "Rocket," drew 47 tons at upwards of thirteen miles an hour; its own weight being under five tons. Now there can be no question that, made at the present day, with all the late improvements and perfection of machinery, the "Rocket," without weighing any more, would draw half as much again. But 50 tons, which is an increase of only 4 per cent., is all that we want.

The weight of rail laid down at first was under 40 lbs. to the yard, and the rail answered very well, until the speed was increased. Now rail-making since then has improved far more than locomotive-making, and I am quite safe in saying that a rail of 35 lbs. to the yard will be far more efficient, in the present day, than the rail alluded to, of the Liverpool and Manchester. Unfortunately there are practical considerations, principally connected with the manufacture, that in my opinion, would render it undesirable to reduce the weight lower than this figure, although rails have been rolled and used under 30 lbs. to the yard.

The gauge was established by Stephenson by taking the mean widths between the wheels of all the vehicles that entered Manchester by a certain road for a number of days.

There are many advantages attending a reduction of gauge for a light Railway, if therefore we make it as narrow as we can, so as to allow free room for the working parts of the machinery. By carefully going into this, I find that three feet ten inches, or say four feet would be convenient.

The elements of the light Railway system are heretofore—

- 1st. A speed of 12 miles an hour, or 10 miles over all.
- 2nd. A gauge of three feet ten inches, or four feet.
- 3rd. A weight of engine of five tons.
- 4th. A weight of rail of 35 lbs. to the yard.

The quantity that could be carried daily, with reference to goods alone, upon such a line, would depend, of course, a good deal upon the length of such line, as well as other things. But upon the average upwards of 1,000 tons a day each way could be easily done, and, if required more than half as much more, that is, upon one line of communication, between two or more places.

The mere physical capability of such a system to perform this work efficiently you might not probably be inclined to doubt; but it is satisfactory to me to be able to adduce some facts to you, with reference to the most important item, the engines, which facts having occurred out here, are capable of easy investigation and verification.

I allude to the establishment, by me, of two small locomotives on the South Beerbhoom District, at a time when the state of the works was such as not to admit of a large engine being brought up from Howrah.

These locomotives were both made out of portable, or, as they are sometimes called, agricultural engines, which have the boiler and fire-box similar to that of a Railway engine, and are calculated to work at the same speed.

One of these was a 3-horse power (nominally) single cylinder, and was mounted on a wooden frame, running upon two pairs of waggon wheels and axles, and having the usual waggon axle-box and guard-plates.

The other was a 10-horse (nominally) double cylinder, and was mounted in precisely the same way, but upon three pairs of wheels instead of upon two.

The weight of the former was about five tons, or one ton at least more than was necessary, on account of the excessive weight of the Railway waggon wheels and axles, which were the only available ones.

This engine, which was arranged with a view to speed, would pull 10 tons easily on the stiffest gradient on the District, 1 in 500. It was used by me for visiting the works, and ran at an average speed of 30 miles an hour, without a load. On turning the arches of the More Bridge, I had occasion to run about 25 miles and back every day, for seven weeks. During the whole of that period, there was only one day on which the engine could not run; the time occupied in doing the total distance of close upon 50 miles, being about one hour and twenty-five minutes.

The other engine, which was arranged for drawing a load, was in the habit of running, with but little intermission, a total distance of from 60 to 80 miles a day. The average speed was about 22 miles an hour, at which rate it could easily pull above 40 tons, and could even take this load up the incline of 1 in a 100, with which the Soorool Junction leaves the main line at a speed of over 10 miles an hour.

This engine weighed about six tons and a half, being upwards of one ton and a half of unnecessary weight from the heavy wheels and axles which were obliged to be used.

Both of these engines in running consumed coal and water in the same ratio to the work done as a large locomotive.

The peculiar arrangement of the driving-axle of the pumping engines allowed of only one method of connecting the power with the driving wheels,—a leather strap working upon drums. This of course was a disadvantage with respect to the goods engine, but with regard to the light speed engine, was found to be no drawback whatever; while the saving in wear and tear of working parts of machinery, as well as in the bearings and tires of the driving wheels, was something extraordinary, and was of course due to the elasticity of the connection.

Of course in an engine especially made for the purpose, a more immediate connection would be made with the driving-wheels, and I doubt not that to such connection some elasticity might be easily given, without at all interfering with the simplicity of the machinery. This, however, is a point for after consideration.

You will at once of course say, that although the fuel consumed may be in the ratio of the work done, and would not consequently be comparatively more expensive on this light system, still the cost of driving the engine and of conducting the train will be precisely the same as for a large train on the East Indian Railway, and

will have to be divided amongst only 50 tons at most, instead of four or five times that amount.

I do not, however, for one moment contemplate the employment of European Drivers, Firemen, or Guards, in the working of this system.

Without going at all into the question of the capability of Natives for driving trains, and conducting, on the large Railways of India, I most confidently state that, at the reduced speed of 12 miles an hour, Native Drivers can be trusted with every satisfaction. I could now at once produce twenty Natives whom I would trust to such duties with perfect confidence. My experience of these men show me that it is principally upon Mussalmen that we should have to rely for all these various duties, while for the management of the traffic and line, the Hindoos (and I can point to more than one fit for the duty) would be the men. This is a matter upon which I have no doubt whatever.

There must, of course, be a European Mechanic as a Foreman of engines at one end of each of the lines of communication, and by having this Official a little more educated than usual, and there are many such (a Driver is not a Mechanic; I believe that ploughmen, who have no acquaintance whatever with any sort of machinery, make the best Drivers,) he could exercise a general supervision over the line to which he might be attached.

I now beg to lay before you the Estimate for one mile of line on the light system—

1st. Rails (35lbs.) or 55 tons, at Rs. 150	Rs. 7,150
2nd. Rails 5 per cent. for siding	357
3rd. Fastenings for rails, 7 tons at Rs. 170	1,190
4th. Sleepers, 2,640, at 12 annas	1,980
5th. Ballasting and boxing up, above that laid down on the road, 26,400 feet, at Rs. 4	1,056
6th. Laying, including the straightening, of rails, 5,280 feet, at 4 annas per yard	440
7th. Carriage of road materials from depôts, on distance say 5 miles, at 9.5 annas	131
Total, Rs.	12,304
The engines would cost each	5,000

I may remark that all the prices include delivery, say in Calcutta, but not carriage beyond.

The rails would be of the section called "Vignoles's," a rail, as you are aware, with a flat foot. There is no doubt that at any rate for light rails this form has been proved to be the best. As regards quality, I should stipulate for the head to be of hard close grained iron, and the foot of fibrous tough iron, and should be very particular as to the mode of manufacture. This would render the rails a little, say 7 per cent., more costly to begin with; but by the superior wear that objection would very soon disappear. Where so much carriage has to be incurred, I consider that the rails sent out here should be of the best quality that can be made. The length I should not put at less than thirty feet, a length, of such a rail, that can be easily managed without any extra cost.

I have no other remarks to make on the Estimate, which will speak for itself, excepting a word as to the sleepers. These I have considered

to be of jungle woods, and as these woods are considered to be a failure, it is necessary I should explain why I would adopt them. The fact is, that these sleepers from all the hard jungle woods, such as dhow, mowha, apoon, and other similar hard and heavy woods, all answer very well, with the exception of keud, that is to say if they have fair play. On the East Indian Railway these sleepers have been mostly laid, at first, without ballast, and have in many instances been allowed to lie more than one wet season in the mud. No timber, however seasoned or impregnated, could stand the alternatives of damp heat and dry heat that sleepers under such circumstances are subjected to. My experience is that the sleepers from these woods, when laid at first in good clean ballast, and properly attended to, last just as well as any others that can be had. For any Districts within reach of the Soonderbunds, an excellent sleeper would be the plank or "fall," as it is called of soondree wood, cut into four parts by one cut down the middle, and one across.

Having satisfied myself that a very light Railway system could be put down, costing no more for what we call the road than about £1,250 a mile, I brought the matter to the notice of Mr. Grant, upon the occasion of that gentleman's visit to the District some year and a half since. Then the only feasible trial seemed to me to be on the new road from the Ahmoodeepoor Station to Sooree, although, being only ten miles, that was scarcely a sufficient matter to call the attention of people at home to.

Mr. Grant, however, mentioned that the Nulhatee Road, twenty-seven miles in length, was then just being begun.

This road, in addition to the greater length, had also the advantage of running to, I believe, one of the largest towns in Bengal, and the old Capital of the country.

Upon investigating the matter a little, I found that, with two exceptions, the gradients were very good, and these exceptions Colonel Young at once gave instructions to flatten a little; the curves being throughout unexceptionable.

I also learned some particulars of the considerable traffic that might fairly be expected would run along the line, with reasonable rates; and also found that the subject of a light Railway to Nulhatee was being very favorably looked upon by the European and Native inhabitants of Moorshedabad. I have been informed too, upon excellent authority, that the Nawab is willing to subscribe Rs. 50,000 to the undertaking, and many rich Natives considerable sums.

I therefore mentioned the matter to some friends at home, with whom I have been connected in Railway matters, with a view to their taking a certain proportion of the necessary capital in shares as payment for the rails, engines, and so on.

Before I received a reply, I had the honor of a conversation with the Governor General, to whom I introduced the subject. His Lordship said that he considered the subject very important, and would be glad to hear more thereof.

When I heard from my friends that they were willing to go into the matter, I had the pleasure of verbally bringing the circumstances before Captain Dickens, who was then officiating for you.

Captain Dickens spoke to Lord Canning on the subject, and I received a reply to say that the

state of the finances prevented the matter being further gone into at that time.

Lately, I have been invited over to Moorshead to attend a public meeting on the subject, and my friends have written to me more than once to know if any thing is doing in the matter, as they bear that industrial undertakings are being taken a great interest in out here just now.

It would not of course do for me to incur, needlessly, expense and responsibility. The first step therefore is for me to obtain from Government a provisional concession of the road, subject to proper conditions.

With this I should not only be justified in incurring expenses in furthering the undertaking, but should be in a better position to bring the local residents and others taking an interest in the matter out here, into business-like communication with those at home who are willing to join in assisting the project.*

Having therefore received the assent of the Lieutenant-Governor of Bengal, as far as that gentleman is concerned, I now beg to ask the favor of your granting me a provisional concession of the road, upon the following conditions:—

1st.—That no shares should be issued until a Company with limited liability is found.

2nd.—That no shares should be negotiated until the one-quarter of the total capital be paid up.

3rd.—That in consideration of the Government handing over the use of one-half of the road from the Nulhatee Station to Jeagunge, the Company engages to construct and work a light Railway, at its own risk, peril, and expense, and to bind itself to the following stipulations:—

I.—Stipulations.

1st.—The line shall follow the course of the road, one-half of which only it shall occupy.

2nd.—The laying down of the line must be commenced within (say) eighteen months from the date hereof, and completed with a further period of twelve months.

3rd.—The complete working plans of the road, the waggons, the engines, and all necessary buildings, to be submitted in duplicate to the Government of India, which shall have the right to cause modifications to be made therein.

4th.—No commencement to be made until the complete plans are returned, signed as approved by the Secretary to the Government of India, one set of plans being retained for reference by the Government.

5th.—Should the plans be detained by Government so long as to prevent a commencement at the stipulated time, No. 2 is to be rescinded.

6th.—Before the commencement of the works, as well as during the progress of the same, the Company to have the right to propose modification in the plans; but no such modification to be carried out without a signed plan from the Government, as approved.

7th.—After handing over the plans as approved, or any modification thereof, Government does not interfere in any way whatever, until the completion of the line which is not to be opened without the sanction in writing of the authority deputed by Government to inspect the line.

8th.—The Company is to find and pay for all land required for digging ballast, as well as that required for temporary purposes. The land required for sidings and stations to be supplied by Government.

9th.—The Company not to be required to raise the line at any point, but all roads meeting the main road to be crossed on the level.

10th.—The Company, while laying down the line, to be invested with all the rights enjoyed by the Department of Public Works that can be of advantage to the prompt and proper execution of the work.

II.—Maintenance and Working.

11th.—The Railway to be constantly kept in good order, so that the traffic may be always carried on easily and safely. The expenses of the maintenance to be borne by the Company, and if at any time the line and its appurtenances are not in good order, it will be competent to the Government to make the necessary repairs, and to recover the same from the Company.

12th.—The locomotives to be of the best possible construction and finish, and to be smoke-consuming.

The waggons for passengers to be of at least two classes, one open, but covered, and the other closed with glass windows.

These and the waggons for the carriage of goods to be of good and solid construction, and all to be kept in an efficient state of repair.

13th.—The Company to submit all regulations relative to the service and working of the line for the approval of Government, but the Company is not to be compelled to run more than one Passenger Train, or Train containing passenger carriages, a day each way.

14th.—The Government to depute persons, whenever it thinks proper, to inspect the line and the stock.

III.—Duration, foreclosing, and falling in of the concession.

15th.—The length of the concession will be 99 years, the concession, commencing the of and terminating the of

16th.—At the period fixed for the expiration of the concession, and by the very fact of the expiration, all the rights of the Company,* will immediately take possession of the property.

The Company is bound to hand over the line and dependences, engines, and rolling-stock, in a thoroughly efficient state of repair; and the Government to have the right to seize the revenues of the last five years, for the purpose of putting the line in proper order, should the Company neglect to do so.

17th.—At any period after the first twenty years, the Government to have the right to purchase back the concession.

The price to be paid to be either the total expenditure on the Capital Account, together with interest on that sum at 5 per cent. for one year or by taking the average of the last five years' profits as an annuity to be paid to the Company for the remaining term of the concession; the annuity not however to be inferior to the profits of the year immediately preceding the taking over. The Company to have the option of choosing either of these prices.

18th.—If the Company should not commence the line by the date named in No. 8, that fact to of itself, at once, cause the concession to be taken from the Company.

19th.—Should also the Company fail to complete the line by the date named in, or should not have

* There is some omission here in the manuscript, probably some such words as the following should here appear—"will lease and Government will &c."

properly fulfilled all or any of these stipulations, it will be competent to the Government to take the line from them, and either to carry on the line, or to enter into arrangements with other persons to do so.

And whatever work may have been done, to become, in such case, the property of the Government.

20th.—And should the working of the line be either partially or wholly stopped at any time, it will be in the power of Government to take immediately the necessary measures for the provisional carrying on the working of the line.

If the Company does not at once, after the organization of the provisional service, prove itself to be in a position to go on with the working of the line, and does not immediately do so, the line can be taken out of the hands of the Company by the Government.

21st.—Should, however, the Company prove that it has failed in its obligations from the pressure of unforeseen and unavoidable circumstances, the last three stipulations not to be applicable.

II.—Tariff and Conditions relating to the carrying of Goods and Passengers.

22nd.—To indemnify the Company for the works and expenses undertaken by the present stipulations, the Government grants the right, in addition to the use of one-half of the road, to make the following charges during the whole term of the concession, for the conveyance of passengers and goods:—

TARIFF.

- 1st. Passengers, 1st Class, per head per mile.
- 2nd. " 2nd " " "
- 3rd. Horses.
- 4th. Dogs.
- 5th. Goods, 1st Class, per ton per mile.
- 6th. " 2nd " " "
- 7th. " 3rd " " "
- 8th. " 4th " " "

and so on.

No distance under six miles to be charged lower than that distance, and for goods, the weight to be taken by intervals of 10 seers, so that any thing between 10 and 20 will pay 20 seers.

The smallest charge for goods to be ———, whether the distance carried, or the weight of the article.

Then to follow the usual regulations and conditions for carrying traffic.

23rd.—The Company shall run the Trains at the rate, including stoppages, of 12 miles an hour, and are not to run at a less rate, nor are they ever, under any circumstances, to be called upon to run at a higher speed.

24th.—The Company to make no special arrangements for the carriage of goods that shall not be shared by all willing to take advantage of the same arrangements.

V.—relating to the Public Service.

25th.—Soldiers to be carried at the same reduced rate as upon the main Railways. If the Government at any time requires to move Troops, the whole of the means of transport possessed by the Company to be placed at the disposal of Government, at a charge of half the usual rates.

26th.—The Company shall be bound to carry gratuitously, and by every Train, letters, despatches, and the persons in charge thereof, that the Post Master General may deem advisable for the service of the public to send; and that once a day there shall be one vehicle set apart, or portion of

a vehicle, as may be necessary, for the business of the Post Office. But notice in writing to be given, at least one week before such arrangements are to come into working to the Company by the Post Master General.

27th.—The Company is not to find any land, buildings, or other accommodation that may be required at the Stations or elsewhere, for the purposes of the Post Office.

28th.—In the event of the Government establishing an Electric Telegraph along the road, the Company to be permitted to make use of the posts thereof for setting up a Telegraph for the Railway purposes; such Telegraph not to carry messages for the general public without the sanction in writing of the Government.

29th.—In any case the Company shall be bound to erect and maintain in working order a Train, Signalling Telegraph, without the use of which no Train to be allowed to run.

VI.—Sundries.

30th.—The Government to sanction no line to be made during the term of the concession which would come in any way into competition with the line of the Company. But all branch roads to be made are to be carried out without opposition on the part of the Company, provided that no obstacle is presented to the construction or working of the Company's line.

31st.—In case of any branch line, or any extension of the Company's line, being considered desirable, the Company to have the offer of the concession of such branch line or extension upon the same terms as they hold the present concession upon. And until the Company have signified their unwillingness in writing and within reasonable time for consideration, the Government not to offer these further concessions to other parties.

32nd.—In the event of other Companies taking up these further concessions, the present Company is to give every facility for the passage of the traffic of the new Companies over its line, or any part thereof.

33rd.—The Company shall permit junctions to be made with its line of any small local branches which are proposed to be made for the development of the country, and which, upon investigation, the Government shall decide in favor of, the Company being heard against.

The junction of any such branch is to be made at the expense of the person making the branch, but under the superintendence and approval of the servants of the Company. No rail of the Company's line to be removed for such purpose without a week's previous notice in writing to the Company, and the presence at the time of a Company's servant.

34th.—The Company to allow their waggons to perform the traffic of such branches under the usual proper regulations.

These regulations to be specified.

35th.—Before the issuing of the Government order which shall ratify the concession, the Company shall pay into the Government Treasury a sum of Rs———, being a porportion of ——— of the capital required by the Company.

This sum shall be refunded by the Government to the Company by fourths, and porportionally to the progress of the works, but the last fourth shall not be returned until after the entire completion of the works.

This list of stipulations is merely suggestive, the object being to get every thing specified distinctly beforehand, so as to avoid misunderstanding.

and consequent delay and trouble afterwards. And one great thing is, that my friends at home would not be inclined to go into the matter, unless they saw very clearly the conditions of the project with respect to Government, and that they run no unnecessary risk beyond that fairly incidental to all free and untrammelled commercial speculations.

I now proceed to call your attention to the financial part of the project.

The estimate would be—		Rs.
1st. Road, 27 miles ...	Rs. 12,500 =	3,37,500
2nd. Waggon, 100 ...	„ 500 =	50,000
3rd. Engines, 10 ...	„ 5,000 =	50,000
4th. Stations and dependencies ...	„ 2,000 =	54,000
5th. Electric Telegraph ...	„ 500 =	13,500
6th. Contingencies, 10 per cent. ...	...	50,500
7th. Superintendence, 10 per cent. ...	...	50,500
Total ...		6,06,000

ANNUAL WORKING.		Rs.
1st. Maintenance of road ...	...	8,100
2nd. Stations and dependencies ...	...	2,700
3rd. Haulage—		
1st. European Foreman ...	3,000	
2nd. Drivers ...	3,000	
3rd. Firemen ...	1,200	
4th. Fuel ...	3,650	
5th. Oiling, cleaning, and lighting ...	1,500	
6th. Repairs ...	5,000	
		17,350
4th. Traffic—		
1st. Stations, &c. ...	6,000	
2nd. Conducting ...	2,160	
3rd. Signals, &c. ...	1,620	
		9,780
5th. General Management, say ...	6,000	
Total ...		43,930

Taking the interest on the capital at the rate of 6 per cent., will give a yearly amount of ... Rs. 36,360
to which add the working... „ 43,930

we have a total required at least of ... Rs. 80,290 a year.

Now to see what traffic will be required to produce this revenue, I shall assume the passengers at one Rupee for the entire journey, and shall put the average of the goods at one-half a pie per maund per mile on the average, or less than the half of what it would cost along the road by carts.

The assumption of fifty passengers through each way per day, will not, I think, be considered unreasonable. This will produce Rs. 33,000 a year, leaving to be made up by goods Rs. 47,290.

This sum represents just 2,000 maunds a day, or each way 1,000 maunds a day, a quantity, I am told by those who have opportunities of knowing, by no means over the mark.

On the Beerbhoom Stations of the East Indian Railway, Goochamb, Bulpoor, and Cynthia, upwards of a hundred Rupees a day is taken for goods at each for the local traffic, and not one of these seems by any means so important a District as that of Moorshedabad.

By an increase in the capital of about Rs 30,000, and in the working expenses of only about Rs. 15,000 a year, half as much traffic again could be carried, bringing up the interest on the capital to upwards of 3 per cent. more. And this is without reference to any increase of passenger traffic, which would doubtless ensue.

I think I may venture to submit that these estimates are careful and prudent statements of the circumstances, and although you may probably find that some alterations may be made with advantage, I beg to assure you that I have put down nothing below the sum that I know each item must amount to.

If, therefore, it is considered that an advantage to the country would accrue by the giving over the concession of half the road to a Company for the construction thereupon of a light Railway, may I beg the favor of your granting me the concession provisionally, to be subject, of course, to the condition that if in say twelve months the capital is not subscribed, such provisional concession to be taken away from me.

In the event of my succeeding in establishing the Company, a matter of which I have but little doubt, I will undertake to say that, *within eighteen months* of the date of the permanent concession to the Company, the line will be open for traffic. If you will do me the favor to enquire, you will find that I keep my word in such cases.

I am inclined to think that a Company might be established with advantage for the general carrying out of "light Railways" for India. But I could on no account advise any such Company to undertake the construction of the roads. The operations of such a Company, were it to undertake that part of the business, would be too small to admit of the expensive staff that would be required; while there would of course be a competition raised with the "Public Works Department," raising the cost of the works.

My opinion is that a Company undertaking the roads would signally fail. Government has an Establishment ready to construct roads; and the operations of the Company should be confined to laying down lines upon these roads and working the same, on the terms sketched out on this paper; the roads being, where possible, kept within certain limits of curves and gradients.

In this way the extension of these communications would go on steadily and without haste. Although such communications are very much required, I would rather see one feasible undertaking for however small a line, than a grand scheme for covering India at once with a net work.

Upon hearing from you on the subject, I am ready to proceed to Moorshedabad, and thence to England, for the purpose of carrying out the undertaking, and believe that in six months I shall be able to say positively whether the matter is going to be done.

From LIEUTENANT-COLONEL H. YULE, Secretary to the Government of India, Public Works Department, to J. E. WILSON, Esq., C. E.,—(No. 4373, dated 12th December 1861.)

Your letter of 8th October, with its enclosures, containing a scheme for the establishment of a light Railway on the road from the Nulhatee Station of the East Indian Railway to Moorshedabad, has been laid before the Governor General in Council.

2. His Excellency in Council considers the scheme a very desirable one, and the line selected

a very suitable one for the experiment of such a Railway. Should it be successful, a very large field would open for the construction of similar lines in localities where traffic would probably be greater, though extent and position render them less suitable for experiment.

3. Your stipulations and conditions appear to the Governor General in Council to be in the main fair and well considered. It is possible that some of them may require further discussion, but in the mean time only two appear to His Excellency in Council as objectionable. One is that which stipulates that the Company, whilst laying down the line, shall be invested with all the rights enjoyed by the Department Public Works that can be of advantage to the prompt and proper execution of the work. It is not understood what sort of rights are intended. No doubt the name of Government is often used by the Subordinates of the Department in the quasi-forceable collection of work-people; but the Government discourages everything of the kind in our own Department, and certainly will not give any facility for the practice in others.

4. The other point is contained in the 30th condition,—“The Government to sanction no line to be made during the term of the concession which would come in any way into competition with the line of the Company.” This is obviously too comprehensive. Government could not pledge itself beyond refusal of sanction to any duplicate or directly competing line.

5. These points are not likely to cause any difficulty, and I am to say that the Government would be prepared to make a concession to any solid Company on such terms as you propose. A stipulation would be made for the trial of a small portion of Indian cast-iron rails, which it is a great object to have tested, and this portion would be supplied at the expense of Government.

From J. E. WILSON, Esq., C. E., to Secretary to Government of India, Public Works Department,—(dated the 21st December 1861.)

I HAVE the honor to acknowledge the receipt of your letter of the 12th instant, No. 4373, conveying the approval of the Governor General in Council to the project of light Railways for India, and the consent of His Excellency in Council to give the Nulhatee Road to any solid Company prepared to take the matter up on such conditions as those proposed by me.

2. From the prompt and liberal manner in which the subject has been met by His Excellency in Council, I have no hesitation in saying that not only will the experiment in question be speedily carried out, but arrangements made to enable this system of communication to be extended without delay to those localities where the want of such is more felt and the traffic doubtless greater.

3. From what I have heard in conversing on the subject since I received your letter, I have every reason to believe that all the money required for the Nulhatee Line would be subscribed here and in a very short time.

4. It may be satisfactory to His Excellency in Council to hear this much, although I do not propose to adopt such a course, and in this view I am strengthened by the opinion of one or two of the first men of business in Calcutta. I believe that even for the Nulhatee Line time will be saved, and certainly for the other lines that will be required far more so by the establishment, in England, of a Company for the purpose.

5. I am therefore shortly proceeding to England with this view, and shall take the liberty of acquainting His Excellency in Council, from time to time, with the progress that is being made in the matter.

6. In conclusion, I beg to say a few words respecting the stipulations objected to by His Excellency in Council to correct any misapprehension as to my real meaning that may have arisen from the hasty manner in which the stipulations were worded out.

7. In stipulating for the Company to enjoy all the rights and privileges of the Public Works Department, I do not at all allude to a quasi or anything approaching a forcible collection of work-people. I have never attempted such a thing on the works that I had charge of on the Railway, and I think that such a privilege, if existing, would be of no use. I meant the rights, if any, of getting carriage for materials, and sometimes supplies by order of a Magistrate who should hear the application; we have often been put to great inconvenience and expense by people keeping their carts and supplies back to raise the prices thereof. This does not matter much where time is not an object, as in that case the people give in; but it is a very serious matter when pledges are given for the completion of work by a given time.

8. The 30th Condition as worded by me defeats the general object of my stipulations,—clearness and precision,—by leaving a door open for discussion. Of course, I could expect no more than is conceded by His Excellency in Council in this respect.

From J. E. WILSON, Esq., C. E., to Secretary to Government of India, Public Works Department,—(dated 3rd May 1862.)

IN further reply to the letter (No. 4373 of 12th December 1861) which I had the honor to receive, conveying the sanction of the Governor General in Council to my project for establishing a light Railway on the road from Nulhatee to Moorshedabad, I beg to submit the following particulars to the attention of His Excellency in Council.

2. I proceeded to Europe by the first Steamer after the receipt of the above-mentioned letter, and devoted myself, for a period of five weeks, to a study of such light Railways as are to be found in use on the Continent, for public as well as private purposes, as well as of all improvements in Railways generally, having for object economy in construction, working, or material. By this study my views as to the feasibility of light Railways, and the advantageous and successful application of the same to India, were strengthened. Tramways, I found, being entirely exploded, and no longer in use for even the commenced industrial purposes.

3. Upon my arrival in England, and after a discussion of details with Engine-makers, Rail-manufacturers, and others, I laid the project before some gentlemen of eminence, with whom I had been connected in Railway matters formerly. The result of this step was prompt as well as favorable. All the materials required from England for the Nulhatee Line were at once ordered; and I was directed to lose no time in making the necessary arrangements for getting the undertaking completed with all possible dispatch.

4. In the letter with which I had the honor of laying my project before the Government of India, I stated that I had little doubt of being able to form a Company for establishing similar lines throughout India. My expectations have been realized, a Company having been formed for the purpose of extending the principle of *light Railways* for all India. I am unfortunately unable to submit a Prospectus of the Company, from my not having received through some mishap those forwarded to me. I am able to state, however, that the capital has all been subscribed; and that the chair has been taken by the Marquis of Tweeddale, of a Board of Directors composed of gentlemen of the highest standing.

5. The sole object that these gentlemen have in joining the Board is "to aid in the promotion of a project which promises to be of such immense benefit to India if carried out on a large scale." And from the opinion expressed on the subject by His Excellency in Council (see paragraph 2 of letter to me, No. 4373 of 12th December last), "should it (the Nulhatee Line) be successful, a very large field would open for the construction of similar lines in localities where traffic would probably be greater;" they feel convinced that in forming a Company for carrying out these lines on a large scale, they have taken a step which will meet with the approval of His Excellency in Council.

6. I have therefore been instructed to ask for permission to lay down *light Railways* on all roads, completed, in progress, or intended, when His Excellency in Council would consider such undertakings to be of advantage to the country.

7. Those roads which offer particular facilities for the speedy completion of light Railways are—

1st.—The Rohilkund main line.

2nd.—Agra to Bhurtpoor.

3rd.—Agra to Mynpoorie.

4th.—Cawnpoor to Lucknow.

5th.—Mirzapoor or Buxar to Goruckpoor.

Those in Bengal I have addressed His Honor the Lieutenant Governor upon.

8. I would undertake that these *five*, together with the Dinagepoor Line in Bengal, should be completed *within two years*, provided the roads were ready, and no unforeseen occurrence take place. I state this after due consideration, and I think the Government is aware of my having kept similar promises on more than one important occasion. With respect to the Nulhatee Line, I have every confidence in being able to open that for traffic before the close of this year.

9. In conclusion, I beg to mention that I have received instructions from the Board to make use as much as possible of articles of Indian manufacture, and not to send home for any thing that can be got out here equally well. This will be particularly of advantage to the development of iron manufacture in India, in which the Government takes so much interest.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to J. E. Wilson, Esq., C. E.,—(No. 1975, dated 26th May 1862.)

HAVING laid your letter dated 3rd instant before His Excellency the Governor General in Council, I am instructed to remark that it will be convenient that you should shew the nature of your authority to enter into negotiation with the Government of India in behalf of the Indian Branch Railway Company before proceeding further to discuss the subjects to which you have alluded.

From LIEUTENANT-COLONEL J. P. BEADLE, Officiating Secretary to Government of Bengal, in the Public Works Department, to Secretary to Government of India, Public Works Department,—(No. 2217, dated 15th May 1862.)

THE accompanying letter from J. E. Wilson, Esq., Civil Engineer, refers to a sanction received by him for the establishment of a light Railway on the road from Nulhatee to Moorshedabad, and to an extended scheme for the formation of light Railway Branches to be undertaken by a Company which has been formed in London.

2. The Government of Bengal has received no official notice respecting this scheme and Company, and I am instructed to request that the Lieutenant-Governor may be favored with information of the proceedings taken, and of the sanction given in the case of the Nulhatee and Moorshedabad Road; and also of the steps, if any, which the Government of India would desire that this Government should take in respect to the extension of this line, which the Company would appear to be prepared to make to Dinagepoor north of the Ganges.

3. A copy of the letter acknowledging the receipt of Mr. Wilson's communication accompanies.

From J. E. WILSON, Esq., C. E., to Officiating Secretary to Government of Bengal, in the Public Works Department,—(dated 3rd May 1862.)

I BEG to submit, for the consideration of His Honor the Lieutenant-Governor, some particulars relative to the project, for which I have received sanction, for the establishment of a *light Railway* on the road from Nulhatee to Moorshedabad.

2. The material for that line is in so forward a state that I am able confidently to promise the opening for traffic before the close of this year.

3. In connection with this project a Company has been formed for the purpose of carrying out similar lines on a large scale in this country, and the capital of the Company has been fully subscribed. The Board of Direction is formed of gentlemen of eminence, who give their co-operation solely with the view of benefitting India, and who trust therefore that they may receive the sanction of His Honor to the extension of the *light Railway* system throughout Bengal.

4. His Honor will of course be the best judge as to the roads which it would be expedient for the benefit of the country to proceed with. The Directors feel most anxious to go on with the line from Berhampoor to the Ganges at Bogwongolah; that the same may be opened for traffic as soon as possible after the Nulhatee Line, of which it may be looked upon as an extension.

5. The Board is also prepared to carry out a further extension from the Ganges opposite Bogwongolah to Dinagepoor, and thence through Rungpoor to the Berhampootra River.

6. The arrangements for the material, rails, engines, waggons, and so on, required by the Company being perfect, (those for the Nulhatee Line are by this time nearly completed), these new lines could be laid down with great expedition. And I will undertake that by the middle of next year the line to Bogwongolah shall be opened for traffic, and that to Dinagepoor before the end of next year; the continuation to the Berhampootra to follow immediately the completion of the road.

7. The Board is also prepared to go on with, at the same time, the lines from Patna to Gya, and from opposite Patna to Mozufferpoor.

(Tirhoot). And I will also undertake that these two lines should be laid down also within two years, provided of course that the roads present no difficulties.

8. Should His Honor the Lieutenant-Governor think proper to recommend that these proposals of the "Indian Branch Railway Company" should be assented to, I beg to ask the favor of an early reply, that no time may be lost in ordering the rails, engines, ferry steamers, and other necessary materials.

From LIEUTENANT-COLONEL J. P. BEADLE, Officiating Secretary to Government of Bengal, in the Public Works Department, to J. E. WILSON, Esq., C. E.,—(No. 2216, dated 15th May 1862.)

I AM instructed by the Lieutenant-Governor of Bengal to acknowledge the receipt of your letter dated 3rd May 1862, and to furnish you with the information given, in the accompanying Note of the Chief Engineer, respecting the roads which are prominently mentioned in your letter.

2. A further communication will be made after receiving from the Government of India information and orders respecting the formation and scheme of the Company for Indian Branch Railways. At present the Lieutenant-Governor has no authority to take any steps in this matter.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to Officiating Secretary to Government of Bengal, in the Public Works Department,—(No. 2092, dated 31st May 1862.)

WITH reference to your letter No. 2217, dated the 15th instant, regarding the line of road from Nulhatee to Jeeagunge, which Mr. Wilson states has been promised to be given to him for the construction of Railway, I am directed to express regret that, through oversight, no official intimation of the proceedings of the Government of India in this matter has till now been made to the Hon'ble the Lieutenant-Governor on the subject. A copy of the correspondence between Mr. Wilson and the Government of India is now forwarded for the information of the Government of Bengal.

2. As Mr. Wilson has not yet shewn that he has any sufficient authority to act in behalf of the Indian Branch Railway Company, it will be prudent to wait until he produces definite powers before entering into any negotiations with him, and this has been already intimated to him in reply to a communication made by him to this Office.

3. I am desired to add that the general question of how such works are to be dealt with is now under the consideration of the Government of India, and a further communication on the subject will be addressed to you at an early date; meanwhile it is sufficient to remark that the Government of India will probably leave the arrangement of all details in the hands of the local Government, after a general expression of the views of the Governor General in Council suitable to the circumstances of each case that may arise.

From J. E. WILSON, Esq., C. E., to Secretary to Government of India, Public Works Department,—(No. 188, dated 12th June 1862.)

Indian Branch Railway.

I HAVE the honor to acknowledge the receipt of your letter No. 1975 of the 26th ultimo.

2. I beg to state that I have been advised of the dispatch, by the last mail, of a letter (copy

herewith enclosed) addressed to you by the Board of Directors of the "Indian Branch Railway Company."

3. I trust that this letter may be considered by His Excellency the Governor General in Council to afford satisfactory information as to my authority to act on behalf of the Company.

From H. W. WICKES, Esq., Secretary, London Board Indian Branch Railway Company, to Secretary to Government of India, Public Works Department,—(dated 10th May 1862.)

I AM instructed by the Board of Directors of the "Indian Branch Railway Company" to transmit, for the information of His Excellency the Right Hon'ble the Governor General in Council, the enclosures as per margin.

1. The Prospectus of the Company.
2. The Conditions.
3. Letter addressed to the Secretary of State for India in Council by the Directors of the Indian Branch Railway Company.
4. Reply of the Secretary of State for India to Paper No. 3.

2. As will be seen from the above papers a solid Company has been formed and has been recognised as such by the Secretary of State for India in Council; and I, as the Secretary to that Company, am desired by the Board to state that Mr. J. E. Wilson, who originally corresponded with Colonel Yule on the subject of laying down light Railways on common roads, has been appointed Chief Engineer and Agent of the Company, and authorized to conclude definite arrangements with the Government of India for constructing the experimental line from Nulhatee to Moorshedabad, now sanctioned by the *Secretary of State for India*.

3. Although the *immediate* operations of the Company are limited to the Nulhatee Branch, it will be seen from the Prospectus that the object in forming a Company with so large a capital was to carry out on a large scale the principle of light Railways on common roads, which has already received the sanction of the Government of India, as communicated in Colonel Yule's letter of 12th December 1861. In accordance with this object Mr. Wilson has been instructed to enter into negotiations for further concessions to the Company, and the Board trust that the Government of India will at once take up the subject with him, and submit their recommendations to the Home Government, in order that the Directors may finally arrange with the Secretary of State for India in Council the conditions on which extended operations are to be carried out.

4. It should be borne in mind that the Indian Branch Railway Company is the first Company which has undertaken to construct Railways in India without a fixed rate of interest being guaranteed by the Government of India, and the accounts of the Indian Railways laid before Parliament shew that the guaranteed interest upon the capital of the Indian Railways represents a very large item of the total expenditure, and this Company proposes to carry out extensive works without any such pecuniary aid.

5. Although Manchester and Liverpool have taken considerable interest in the formation of this Company, the required capital for carrying out the undertaking on a large scale has only been obtained by the direct canvassing of the Directors amongst their friends who have subscribed the necessary capital in anticipation of obtaining from the Government of India conditions similar to

those sanctioned for the experimental line, and the Directors would urge upon the Government the expedience and importance of adhering, as far as possible, to those conditions, as any serious departure from them would in all probability defeat the great objects for which the Company has been formed, and limit its operations merely to the Nulhatee Branch, with scarcely a prospect of a gain raising so large a capital without guaranteed interest from the Government of India.

From T. G. BARING, Esq., Under-Secretary of State for India, to W. DENT, Esq.,—(dated 2nd May 1862.)

I AM directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of the 17th ultimo, relative to the proposed construction of a Branch Railway on the road leading from the Nulhatee Station of the East Indian Railway to Moorshedabad.

Under the explanation now afforded of the terms on which the Indian Government "are prepared to make a concession of the road in question to any solid Company," Sir Charles Wood will not object to sanction being given to the Company represented by yourself (should the Indian Government so determine), in order that an experimental Branch Railway may be laid down upon it, not to occupy more than half the width of the road, and with due precautions for the safety of persons using the ordinary roadway, and he will advise the Indian Government accordingly.

It must however be clearly understood that the road from the Nulhatee Station to Moorshedabad alone is here referred to, and that should the Company be permitted to lay down the rails on that road, the question of any further concessions for the construction of Branch Railways in other places, and the conditions on which they should be made, will remain for future consideration.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to J. E. WILSON, Esq., C. E.,—(No. 2451A, dated 28th June 1862.)

WITH reference to your letter No. 188, dated 12th June 1862, I am directed to request that you will be good enough to call at your convenience to discuss the terms of a definite arrangement to be entered into on the basis generally mentioned in Lieutenant-Colonel Yule's letter No. 4373, dated 12th December 1861, regarding the concession to you of the Nulhatee and Jeeagunge Road, to be converted into a light Branch Railway.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to Officiating Secretary to Government of Bengal, in the Public Works Department,—(No. 3609, dated 18th September 1862.)

IN continuation of my letter No. 2092, dated 31st May, relative to the negotiations that had taken place between Mr. Wilson and the Government of India, for the construction of a light Railway on the road between Nulhatee and Jeeagunge, I am now directed to inform you that His Excellency the Governor General in Council having carefully considered the terms which should be given in the present case has instructed me to forward a draft of what is proposed for the consideration of the Lieutenant-Governor.

2. His Excellency in Council has given his best attention to the important subject involved in the proposals of the Indian Branch Railway Company, which has now taken up Mr. Wilson's first scheme, and of another Company of a similar

character. These proposals have for their object the construction of light branch Railways without guarantee from the Government, and His Excellency in Council is most desirous that all proper consideration should be shewn to these Companies, and all proper encouragement given to them in carrying out such works.

3. But though the Government of India is quite prepared to consider any definite schemes, such as those put forward by these Companies, it does not deem it expedient to make any general offers of assistance to Railway projectors at large, or to state any specific terms on which it would, in all cases, undertake to co-operate with capitalists for such purposes. It is for many reasons better to deal with each case as it arises, and to determine the claims of any *bond fide* proposal to receive Government support, on a consideration of the special character of the project, and of the inducements that may be expected to lead capitalists on the one side to desire to undertake the work, and the Government on the other side to desire to see it undertaken.

4. His Excellency in Council has caused the draft of the Conditions of the Agreement with the Branch Railway Company for the Nulhatee and Jeeagunge Railway to be prepared in accordance with the above principles, and to meet so far as was possible the exact stipulations of Mr. Wilson's original proposals which the Government of India had generally accepted. One point however had been overlooked in the original proposals, which the Government feels to be essential, namely the necessity for reserving the power of calling upon the Company to erect fences along the whole line, should it be found necessary for the public convenience or safety. In consideration of this, which may of course lead to considerable outlay not at first foreseen by Mr. Wilson, His Excellency in Council has proposed to make certain further concessions, in the shape of an annual payment towards maintenance, equivalent to the probable charge of keeping up the portion of the Road made over to the Company, which otherwise would have fallen on the Government, and of a payment equivalent to the amount paid as import duty on the Rails, &c., actually put down for the Road.

5. The Lieutenant-Governor is requested to examine these draft Conditions, with the explanatory remarks that accompany them, and to favor the Government of India with any suggestions that he may desire to make, either regarding their general scope, or any special point. It will be understood that the present draft can only be expected to deal with the question from a general point of view, and that the insertion of any Conditions that are called for from local causes must rest altogether with the Government of Bengal. The Clauses that may require attention in this sense will probably be Nos. 2, 3, 6 and 8. It may be thought desirable to specify more exactly in Clause 6 what the Government will do to the existing Road, and what will be left for the Company to do. Under Clause 8 it will be seen that no over-bridges can be claimed from the Company unless specially agreed upon in the first instance.

6. It has been thought convenient to draw out the Conditions of the Agreement in a separate form, and avoiding, as far as possible, legal phraseology; so that the contract itself, which will be the legal instrument, the preparation of which

may be left to the Government Solicitor, may be as concise as possible, consisting mainly of a covenant to make the Railway on the Conditions annexed, and of Clauses to refer any dispute to Arbitrators.

7. This being the first agreement of the sort entered into by the Government, His Excellency in Council has thought it better to have the papers prepared under the direction of the Government of India; but it is the wish of the Governor General in Council that the Contract, when the conditions have been finally approved by the Government of India, should eventually be executed by the Lieutenant-Governor, to whom His Excellency in Council will henceforth leave any other applications of this nature to be dealt with on the general principles explained in this letter. It will however be expedient that before the Government is finally committed to any fresh Contract for a Branch Railway, the exact terms proposed should be submitted to the Government of India for perusal, in order that the Governor General in Council may have an opportunity of offering any remarks that might be thought proper. I am to add that it will be greatly conducive to convenience if the same form of Agreement is adopted as far as practicable, in all cases, introducing only such changes as the special terms of each case require.

8. Although, as before stated, the Government of India thinks it most expedient to deal with such proposals as these on their individual merits, yet there are some general points relating to them on which the views of His Excellency in Council may usefully be expressed.

9. In the first place there will be certain matters which will be more conveniently and properly dealt with by an Act of the Legislature than by a Contract between the Company and the Government; and some for which Legislative interference would be essential. Such are all the provisions necessary for securing the safety of the public, and the protection of private rights, whether in the original construction or in the subsequent working of the Railway. The power of the law must also be applied to enforce the Bye-laws of the Company; to give them authority to levy the Fares and Tolls approved for their Tariff; and to enable them to obtain land. The Government of India has already under its consideration the Clauses of such an Act.

10. When agreeing to the construction of any Railway, the Government, acting in behalf of the public, will naturally exercise a certain control over the determination of the exact line to be taken; and such a power may also at times be usefully exercised in deterring speculators from embarking in schemes that might prove ruinous to them, and so be generally injurious to the prospects of a further extension of Railways by private enterprise. Under no circumstances could it be right to give any thing like a monopoly right in any particular district to the projectors of any line; and the claims of projectors to consideration in respect to future extensions, could, it is believed, be sufficiently protected by the provisions of the general Act.

11. As regards the Tariff, the Government may justly claim some power of control in behalf of the public, in consideration of the special powers and privileges which are either directly or indirectly given to the proprietors of a Railway by the law. The exact manner in which this check would best be exercised, and the extent to which it should go, must depend on the circum-

stances of each case; either a maximum might be fixed once for all at first, or a power reserved to the Government of reducing the rates under prescribed conditions, as, for instance, after a certain maximum profit had been realized.

12. With respect to the nature of the assistance to be given by the Government, it will of course be an object that it should be no more than is really essential to attain the end desired; and the extent to which it should go, whether to the grant of land free, or of a road already made, or whether it should include any direct pecuniary aid, can only be properly determined in each case on its own merits. It may be added that, as the value of all aid from the State might be reduced to a pecuniary equivalent, all such aid is in truth in the nature of a subsidy, varying in its amount and in its convenience, and there seems no very good reason for rejecting one form of aid and accepting another, unless on the ground of its leading to results either financially or generally inconvenient.

13. The Government of India would desire to stipulate for the free conveyance of Mails on all Indian Railways; and the transport of Troops, Police and Public Stores, at reduced rates, will also be a reasonable condition to propose. Further, where land is given free of cost, the State may fairly claim to exercise the right of a ground landlord, to re-enter and to take possession of the works fixed to the soil, either in case of the Company not completing its Contract, or on the lapse of the term for which the concession was made. It may also be well to reserve a power to the Government to purchase on stated terms. This would be the most complete safeguard that the public could have for the good conduct of the proprietors of any Railway; and might otherwise offer a simple remedy for future complications or difficulties now not foreseen.

14. In conclusion, I am to remark that all charges on account of such Railways as these must be provided for in the Public Works Budget under the head "Railway," and that no special pecuniary grants from Imperial Funds are to be anticipated on their account, either now or hereafter. Railways in fact are roads of a superior order, and the funds necessary for meeting charges arising from the construction of unguaranteed lines of Railway must be met by economy in the sums heretofore set apart for the construction and maintenance of common roads. The Lieutenant-Governor will also understand that his ordinary power of sanction, under the usual restriction as to amount and general approval in the Budget, may be exercised, at his discretion, in the case of works to supplement an unguaranteed Railway under an agreement with Government.

15. Any proposed arrangement with a Railway Company that cannot be carried out under the above conditions must be specially reported to the Government of India for its orders.

From LIEUTENANT-COLONEL R. STRACHRY, R. E., Secretary to Government of India, Public Works Department, to Agent, Indian Branch Railway Company, (No. 3610, dated 18th September 1862.)

I am directed to forward, for your information, copy of a letter this day addressed to the Bengal Government, relative to the proposed Branch Railway from Nulhatoo to Jeengunge, and of the draft Conditions referred to therein; and to request that you will communicate with the Secretary to the Bengal Government, in the Public Works Department, on the subject.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to Secretaries to Governments of Punjab and North-Western Provinces, in the Public Works Department,—
(Nos. 3643—4, dated 18th September 1862.)

I AM directed to forward, for the information and guidance of the Lieutenant-Governor* the accompanying corresponding relative to the contemplated operations of certain Companies established for the construction of light Railways in Bengal, and to inform you that the Government of India will gladly see the Government of† co-operate with any solid Company for the execution of any definite project of this description on terms generally in conformity with those proposed for the Bengal Companies, and subject to the financial and other restrictions adverted to in my letter No. 3609 to the Bengal Government.

[DRAFT.]

OBSERVATIONS.

Special conditions of the Agreement between Her Majesty's Secretary of State for India in Council and the Indian Branch Railway Company for the construction of the Nulhatee and Jeeagunge Branch Railway.

NOTE.—Words printed in italics in the Conditions are to be understood as liable to be varied according to the circumstances of each case.

1. The Company to construct a light Railway Line from the Nulhatee Station of the East Indian Railway to the River Bhagiruttee at Jeeagunge, being a distance of about twenty-seven miles.

1, 2, 3. These Clauses would be varied according to the exact nature of the proposal.

2. The line to follow the Road now in course of construction between Nulhatee and Jeeagunge.

3. One-half of the said Road, together with the additional side space and other Land. lands shewn in the land plan hereunto annexed, will be placed at the disposal of the Company by the Government.

4, 5. It is not desirable to bind the Government to supply land free of cost for any thing but the specific line which the Company engages to execute; and further it will be right to restrict the claim to what is essential for the permanent line and Stations. This will not prevent the Government from acting on the powers it may have under any Act of the Legislature to take land, whenever it may think fit to do so; or from giving any extra grant of free land if it thinks fit.

4. All land in addition to that first placed at the disposal of the Company with the half Road under Clause 3, which the Government shall from time to time agree to be necessary for the purposes of the Company, shall be taken up by the Government in due course of law, and made over to the Company for its use.

5. Of the land thus to be taken, so much only as shall be made over to the Company on account of any extensions, diversions, sidings or stations, previous to the date fixed for the completion of the line, shall be paid for by the Government; all land made over by the Government to the Company on any other account before that date, or any account whatever after that date shall be paid for by the Company.

6. The Government to complete the Road in a manner suitable for an ordinary metalled carriage road, before handing it over for the use of the Company.

6. This Clause should specify, so far as seemed essential, what works the Government undertook to execute before handing over the Road or Land to the Company.

7. The Company shall submit to the Government drawings and descriptions of the works, machinery, rolling stock, buildings, and other appurtenances of the Railway in such manner as shall from time to time be required by the Government.

7. It will be convenient for the Government to have suitable drawings of all such Railway works; and a general set of Rules on the subject may be framed to ensure uniformity and facilitate comparisons and references.

8. The Company to erect fences and to provide for the passage of roads or paths across the Railway on the level, as directed by the Government, excepting as otherwise specially agreed upon.

8. The erection of fences when thought necessary by the Government must be insisted upon. The great expense of crossings, otherwise than on the level, makes it proper to stipulate beforehand where they will be required.

9. The Railway to be for a single line, the gauge to be four feet.

9. For branch lines the uniformity of gauge need not be insisted on; more particularly where such lines are constructed in districts intersected by large rivers which are not likely to be bridged.

10. An Electric Telegraph to be erected by and at the expense of the Company capable of signalling the arrival and departure of trains in a satisfactory manner. Also suitable Signals, to be approved by the Government, to be erected for working the traffic.

10. An Electric Telegraph may be looked on as essential for working a single line.

11. The position of all Stations to be approved by the Government; and no Station to be commenced without such approval.

11. The Government will commonly have better means than the Railway Company's Agents, of forming a correct opinion as to the best position for Stations.

12. The Company at all times to make such alterations in and additions to their works or rolling stock, &c., as shall be declared by the Government to be necessary to ensure the safety of the public.

13. The works to be commenced before the 1st January 1863, and the line to be complete and open for traffic before the 1st January 1864.

14. On the requisition of the Company, a Government Officer to be deputed to inspect the works when completed, and the Government, if satisfied on his report that the line may be opened with safety to the public, shall notify that the line is so opened, and the Company shall not use the line for public traffic till its public opening is thus notified.

15. The Company shall, from the date of the opening of the line for traffic, maintain in good order the whole of the earthwork of the said Road, together with all the masonry works appertaining thereto, and the Railway constructed on the half Road-way made over to the Company, with all its works, rolling stock, and appurtenances.

16. The Government, so long as it may think fit to maintain the half of the Roadway not occupied by the Railway, as a metalled road, shall pay for all charges on account of such maintenance, and the Company shall only be responsible for the charges on account of the earthwork and masonry works as aforesaid, but not for the metalling.

17. If it be found necessary, after the line is opened for traffic, to make any additions or alterations to the earthworks, or to the masonry or timber bridges, or culverts, on the road, not being such as would have been fairly included in, or incident on, the maintenance of the Road had it been used as an ordinary carriage road only, all such alterations and additions shall be at the cost and risk of the Company alone; but no such alterations or additions shall be made without the consent of the Government being first obtained.

18. All engines, carriages, and waggons of all sorts used on the line to be of good and solid construction, and to be subject to survey and approval by a Government Officer before they are permitted to be used on the opened line.

19. The Company to provide for the service of the line all such establishments of all descriptions whether of clerks, engine drivers, guards, signalmen, pointsmen, gatesmen, police, and so forth, as shall be necessary for the working of the traffic and the security of the public.

20. The Bye-laws and Regulations of the Company affecting the public use of the Railway to be submitted for approval to the Government before they are put in force.

21. The Company to run at least one train with passenger carriages of all classes each way every day, along the whole of the opened line, and at an average speed of not less than twelve miles an hour, including stoppages.

22. The passenger carriages to be of at least two classes, both covered over head, and one closed with glass windows.

12. This Clause in fact merely declares what the Company could be forced to do on an order by a Magistrate, but it seems better to leave the decision of such matters, as far as possible, with the Government.

13. It is expedient to allow ample time, so that the Company can have no reasonable cause for not completing the works according to its Agreement.

14. The official inspection of a line before public opening is an essential precaution in behalf of the public safety.

15, 16. It has been thought better, to avoid complications, to make the Company responsible for all the repairs of the road excepting any metalling which the Government will maintain if it pleases. An allowance is made to the Company for maintenance by a subsequent Clause.

17. This stipulation seems essential in the case of the transfer of existing roads to a Company. The Government cannot be reasonably expected to accept the risk of re-constructing the masonry works of the Road, which must be taken as it stands, subject to any special stipulations made at the outset.

18, 19. These Clauses are introduced to enable the Government to interfere if a line is badly worked.

20. Powers will be given, under the general Act, to legalize the Bye-laws and Regulations, as in the case of the guaranteed Railway Companies.

21. The speed to be fixed as a minimum would be liable to vary, but it should invariably be made to include stoppages, or the condition will be futile.

22. This Clause too will be liable to variation.

23. The Tariff of charges to be *not higher than the lowest Tariff in use on any portion of the Bengal Division of the East Indian Railway, at the time of the opening of the proposed line*; and the classification of Passengers and Goods, and the general subsidiary rules under which the charges are made, to be as nearly as possible similar to those in force for *the Bengal Division of the East Indian Railway*.

24. The Company to submit from time to time to the Government a complete statement of the Tariff of charges of all descriptions and to be bound to correct any thing in the Tariff not authorized by these conditions.

25. A list of all fares and tolls, duly certified by a responsible Officer of the Company, shall be exhibited at every Station where such fares or tolls shall be payable.

26. On the payment of the proper fares or tolls, all persons or Companies shall be entitled to use the Railway, or travel thereon, to send goods thereby, and to run properly constructed engines and carriages thereon, under suitable regulations to be approved by the Government; and the fares and tolls shall be levied (excepting as provided hereinafter) at the same rates on all persons whatever using the Railway, and, unless with the sanction of the Government, no special advantages not conceded to the public generally shall be given directly or indirectly to any one individual or firm in any form.

27. On the completion of the works being certified under Clause 14, the Government shall pay to the Company a sum equivalent to the Import duty that shall have been paid on the quantity of permanent way material (that is to say, rails, chairs, and fixings) actually used and in place on the line on its public opening, and such sum shall be calculated at the rates of duty charged for such material when imported as ascertained from the Custom House Receipts, and on the said actual quantity in place, as certified by a Government Officer to be deputed to ascertain the same.

28. The Company shall receive from the Government a subvention of 125 Rupees per mile of Railway open for traffic, to be paid annually, reckoning from the date of the opening of the line for public traffic, as a contribution towards the cost of the maintenance of the said Road as agreed under Clause 15.

29. As soon as the declared dividends or net profits of the Company in respect of the Capital Account of the Railway shall amount to 5 per cent. on such Capital or upwards for two years consecutively, or for four half-years if the profits are declared half-yearly, the above subvention shall ~~cease and not~~ be afterwards renewed.

30. Officers and Soldiers and their families and Camp-followers, and Police and their Prisoners, to be carried on the requisition of a proper authority at fares reduced by a deduction of one-third on the ordinary fares on the line. The Government shall declare who is a proper authority within the meaning of these special conditions.

23, 24. The conditions determining the regulation of the Tariff must greatly depend on circumstances, but a reference to the Tariff of the main line of Railway, in connexion with which any branch is contemplated, will commonly be convenient. Under the general Act it is proposed to enable any individual to sue the Company for any personal damage he may suffer from any breach of these conditions, and this will of course suffice to protect the public from overcharge or other ill-treatment by the Company's servants.

25. This will be made obligatory in the general Act, but may usefully be introduced here also.

26. Under the general Act it will be necessary to state in these conditions to what extent the public is entitled to use the Railway. The latter part of the Clause is usual in English Railway Acts.

27. To admit the Railway material for these Companies duty free might lead to complications, and would open a door for abuses. The system proposed to be followed by this Clause will give the Company substantial relief from the Import duty on the great bulk of the iron work, and will, it is believed, obviate all inconveniences. The payment will be a Public Works charge.

28. A fixed sum should be named to obviate disputes. It may be calculated fairly at the entire probable cost of maintenance of the Road as a metalled road, less the half cost of the mere metalling, which the Government will still have to provide. The sum would also be liable to vary according to circumstances.

29. The grant-in-aid for maintenance may fairly cease when the Company finds that its returns amount to 5 per cent.

30, 31, 32. These Clauses should be carried out as regards Troops under general rules which should be framed in communication with the Quarter-Master General of the Army, and assimilated, as far as possible, with those in force on the guaranteed lines. The rules for Police should be analogous.

31. All public baggage, stores, arms, ordnance, ammunition, and the like, also Government horses and cattle dispatched under proper authority; also the regulated amount of private baggage belonging to any Officers, Soldiers, or Police travelling under proper authority; to be carried at rates reduced in like manner by a deduction of one-third on the general charges for Goods on the proposed line. So far as practicable, Troops and Police travelling on the line shall be bound to assist in the loading and unloading of baggage and stores transported with them or for their use.

32. The Government to be entitled to claim the use of the whole of the means of transport of the Company for the conveyance of Troops or Police on an emergency to be duly declared by proper authority at the abovenamed rates.

33. The Company shall carry free of charge, by every train all mails committed to its care, also any persons in charge of the mails. The Company shall also provide without charge, after due notice, a vehicle, or portion of a vehicle, to be approved by the Government, properly fitted up for the special use and business of the Post Office. But all accommodation for the Post Office at Stations on the line shall be provided by the Government.

34. The Company to permit the Government to erect at any time and to maintain a line of Telegraph within the land made over to the Company for the Railway without any payment for compensation for the use of such land.

35. The Company to give all reasonable facilities and information to Officers appointed by the Government to inspect the line and rolling stock as well as all Stations and other buildings and all things connected with the working of the Railway.

36. On the report of a Government Inspector that any thing has been done or has been omitted to be done by the Company or its Agents contrary to these special conditions, the Government may call upon the Company to make good the defect within a stated time, and any neglect to comply with a requisition so made shall be held to be a specific breach of covenant on the part of the Company.

37. In the event of a Government Inspector reporting that the line, or any part of it, or any building, or any part of the rolling stock, or any other thing connected with the working of the Railway cannot continue to be used with proper regard to the rights or the safety of the public, the Government may prohibit the use of such thing, and the Company shall immediately abstain from the use of any thing the use of which has been so prohibited.

38. The Company shall deposit with the Government, before it is permitted to occupy the half Roadway to it, or any part of it, the sum of Rs. 60,000, being 10 per cent. on the estimated amount of the Company's outlay, for the construction of the works, and the provision of the rolling stock, required for the proposed Railway, as security for the proper fulfilment of the conditions of the agreement with the Government.

39. The deposit shall be made in a manner to be approved by the Government, and may be in

33. The Government will invariably insist on the mails being carried free on all Indian Railways.

34. The convenience of a Railway in inspecting and repairing a Telegraph line is very great; and this provision has been inserted to enable the Government to avail itself of a right it may wish to exercise.

35, 36, 37. The general Act will empower the Government to appoint Inspectors, and give suitable powers for ensuring proper facilities for their inspections and for enforcing their recommendations in behalf of the public security.

38, 39, 40, 41. The deposit of a sum as security will also be ordered by the general Act, which will further provide that such deposit will be available in certain cases to pay for preliminary expenses, or expenses contingent on taking up land for the Company.

Government or other approved securities. All interest accruing thereon shall belong to the Company, excepting as hereafter declared in the event of any forfeiture of the deposit taking place.

40. The deposit to be re-paid by the Government to the Company in portions of one-fourth, proportionally to the progress of the works, as certified by the Government Inspector. The last fourth shall not be re-paid till the line is duly opened for traffic.

41. In the event of the works not being completed within the now period agreed upon, or within any further extended period that the Government may allow, any portion of the deposit remaining in the hands of the Government, with all interest accrued thereon, and which shall not have been paid over to the Company, shall become the property of the Government.

42. The concession of the half Roadway, and Rights of property. of all land that shall be made over to the Company for its use free of cost, shall, unless otherwise specially agreed, be for a term of ninety-nine years, commencing from the 1st January 1863 and extending to the 31st December 1961.

43. On the expiry of the abovenamed term (unless the Railway shall sooner have become the property of the Government,) the whole of the property in the Railway, including moveables and immoveables of every description, and all things used for the working of the traffic, will pass from the Company to the Government. And the Company shall thereupon give up to the Government in a thorough state of repair the line and its appurtenances with a sufficient quantity of all engines and rolling stock, tools and other appurtenances required for the maintenance of the works and the efficient working of the traffic; and such quantity shall be calculated on the average stock of the Company during the last five years of the term.

44. At any time after the expiry of twenty years from the commencement of the term, the Government, on giving one year's notice of their intention, may purchase from the Company the Railway with its engines, rolling stock, tools, and other appurtenances. And the Company shall thereupon give into the possession of the Government in a thorough state of repair the line and its appurtenances with a sufficient quantity of all engines and rolling stock, tools and other appurtenances required for the maintenance of the works and efficient working of the traffic; and such quantity shall be calculated on the average stock of the Company during the five years next preceding the date of the said notice.

45. The payment to be made by the Government for the Railway if thus taken, shall be at the option of the Company as follows, *viz.*, either the total sum expended by the Company for the construction of the line and the provision of rolling stock, &c., and properly carried to the Capital Account of the Company, together with five per centum on that total sum; or an Annuity for the remainder of the term equal to the average of the profits of the five years next preceding the period of purchase; or an Annuity for the remainder of the term equal to the profits of the last year of those five.

42. This term may conveniently be fixed in all cases, unless for any special cause a shorter is proposed.

43. On the lapse of the term, the Government, if it had given no other aid than the necessary land free of cost, would commonly not desire to claim more than the land and buildings, &c., fixed to the soil; and if the land were not given free, this too might be waived. The Clause however is one that does not greatly affect the interest of the Company.

44. This power the Government will look on as almost essential in some form.

45. The application of this Clause would involve a determination of what sum had been properly carried to the Capital Account. If, as is provided in Clause 53, the Government appointed an Auditor, all question as to this would be avoided. Otherwise it might be necessary to have recourse to arbitration to settle the question. The same remarks will apply to all the Clauses in which reference is made to the Capital Account, or to the profits or dividends.

46. At any time within a period of five years after the Railway has been opened for public traffic, the Company may, on giving six months' notice in writing to the Government, withdraw from the further working of the line, or, with the assent of the Government, from the further working of any portion thereof. The Company may in either such case remove all the rolling stock, tools, and other appurtenances used for the traffic or maintenance of the works, also all stores and moveables, all machinery and permanent way material, but not ballast, whether fixed to the soil or otherwise, also all telegraph posts or wires or the like. But all buildings, all masonry brick and earth-works, all bridges and culverts of whatever description, appertaining to the Railway, also all land occupied by the Company and provided by the Government free of cost, with all buildings or structures erected thereon, permanent or otherwise, and all fences, gates, and the like, shall thereupon pass to and become vested in the Government absolutely. Provided also that the Government shall have the option of claiming at any time within six months from the receipt of the notice of the Company to purchase at a valuation any thing which the Company would otherwise have been entitled under this Clause to remove. Nothing so claimed shall be removed or disposed of by the Company.

47. The Company, before removing under the last preceding Clause any of the permanent way materials from the line or the part of it from which they propose to withdraw, shall re-pay to the Government (unless in any case it be otherwise specially agreed by the Government) the full sum paid by the Government to the Company on account of such materials under Clause 27 of these special conditions; and if any sum so payable before any such materials may be removed shall remain unpaid for six months after the Company shall have withdrawn from the working of the line or of any part of it as aforesaid, then all the said materials on the line or the part of it, so closed for traffic shall pass to and become vested in the Government absolutely, and the Company shall have no further right to claim or remove the same.

48. If the Company shall not, before the 1st January 1864, or within such further period as the Government may hereafter appoint, complete the works, and provide all necessary rolling stock and other conveniences as agreed upon;—

Or if after the opening of the line for traffic default be made at any time in the maintenance or working of the line as agreed under these special conditions, and if the Government shall require the Company to remedy the default or to maintain or work the line as agreed upon, and if the Company shall not within six months from the receipt of such requisition fully comply with the terms thereof;—

Or if the Company shall commit any specific breach of covenant as defined in Clause 36 of these special conditions, and shall continue to commit such breach of covenant, or shall not remedy the consequences thereof within six months after they have been required by the Government to cease from such breach or remedy the consequences thereof;—

Or if the Company shall commit an act of Bankruptcy;—

46. It is expedient to admit of a Company withdrawing from an enterprize, which is liable to be found a commercial failure, and is undertaken mainly at its risk, on liberal terms.

47. It is right for the Government to insist on the re-payment of the bonus on the Rails, &c., given under Clause 27, or the Company might be placed in a position of unfair advantage as compared to other importers of iron.

48, 49. Forfeiture Clauses to provide against breach of contract are essential, and no Company intending to carry out its engagements fairly can object to them if reasonably framed.

Then the Government may enter and take possession of the line, and of all the works, and of all rolling stock brought on to the line, and of all things whatsoever appertaining to the Railway belonging to the Company, and being on land made over to the Company by the Government free of cost.

49. The powers of the Government shall not be exercised under Clause 48 in the event of the default in the opening of the line arising from anything beyond the control of the Company.

50. The whole agreement between the Company and the Government, and the conditions under which the Company shall be placed in occupation of any land by the Government, and under which it shall carry on its business in connexion with the proposed Railway, are and shall at all times be subject to all Acts of the Legislature, now existing or hereafter to be passed, and the Company shall have no claim against the Government in respect of the agreement by reason of any thing ordered or permitted or prohibited by any such Act or Acts.

51. The Government shall not be liable in any way to make good to the Company any loss or damage sustained by the Company arising out of the present agreement or connected with the constructing, maintaining, or working the Railway, and the entire risk shall rest on the Company alone.

52. The Company shall appoint an Agent to reside at some place in the *Province of Bengal* to be approved by the Government, by whom all notices or communications shall be received in behalf of the Company, and who shall be duly authorized by the Company to act in their behalf in all things concerning the proposed Railway so far as relates to the present agreement.

53. The Government, if called on by the Company so to do, shall appoint an Auditor to audit the accounts of the Company, on the understanding that all actual expenses are paid by the Company.

54. The Company shall not lease, sell, or otherwise alienate in any manner the Railway or any part of it to any person or Company unless such person or Company shall agree to be bound by all these special conditions, and unless the Government shall consent to such lease, sale, or transfer, and no such lease, sale, or transfer shall be valid, unless with the assent of the Government.

50, 51. These Clauses are probably a mere recital of what would under any circumstances be deemed the law, but in the present state of Railway enterprise in India, it is expedient to insert them among the conditions.

52. This Clause is necessary to ensure the convenient working of the agreement.

53. Some Companies have asked for this, and there is no objection to it.

54. The Government acting in this agreement in behalf of the public, it is necessary to secure the interests of the public in the Railway as completely as possible.

From MESSRS. J. BOBADAILE AND Co., Agents and Secretaries, Indian Tramway Company Limited, to Secretary to Government of India, Public Works Department,— (dated 2nd June 1862.)

We have the honor to transmit herewith a Prospectus of the Indian Tramway Company Limited.

The Board of Directors in London deputed Mr. Forde, C. E., to visit India on behalf of the Company, and he has just arrived in Calcutta from Bombay and Madras, with the Governors of which Presidencies he has had most satisfactory interviews. He is now desirous to have the views of the Government of India with respect to the project, and to learn what concession they are prepared to make, and we shall feel obliged if you will arrange for an early interview with His Excellency the Governor General.

Mr. Forde will furnish every information required, but we may mention here that the Company only desire such terms from Government as will enable them to raise the Capital.

The following they think would be sufficient for the purpose, and which they hope may be conceded by Government, viz. :—

1. Land Free Clause.
2. Materials free of Duty.
3. Protection from Competition.
4. Accounts audited by Government.
5. No interference until profits arrive at 15 per cent. per annum, and then traffic kept down to that.
6. Provisional subvention in one sum or annually of a sum of money equal to that which

would otherwise be incurred in the making and maintenance of a good road.

7. This annual grant or subvention to cease upon each line of Tramway so soon as it shall have yielded for two consecutive years a net profit exceeding 5 per cent.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to MESSRS. J. BORRADAILE AND Co., Agents and Secretaries to the Indian Tramway Company Limited,—(No. 2163, dated 9th June 1862.)

I HAVE the honor to acknowledge the receipt of your letter dated 2nd instant, forwarding a Prospectus of the Indian Tramway Company "Limited," and in reply to state that it will be convenient before proceeding further if you will satisfy the Government that you have received authority from the Company to act as their Agents. On obtaining a sufficient proof of this, the Government will lose no time in replying to your letter.

2. With reference to paragraph 2 of your letter, I am to state that if Mr. Forde will be good enough to submit his request for an interview with His Excellency the Governor General to His Lordship's Private Secretary, a time will be fixed for the purpose.

From MESSRS. J. BORRADAILE AND Co., Agents and Secretaries, Indian Tramway Company Limited, to Secretary to Government of India, Public Works Department,—(dated 10th June 1862.)

WE have to acknowledge receipt of your letter

Letter from Mr. M. R. Scott, Secretary, dated London, 18th March, to Messrs. May, Pickford and Co.

Letter to Messrs. J. Borradaile and Co., dated London, 12th March 1862.

Note from Mr. G. Adie, of May, Pickford and Co., to Mr. F. Schiller, of J. Borradaile and Co., dated Calcutta, 21st April 1862.

requesting us to act as Agents for the Company.

2. In a note from Mr. Adie (partner of Messrs. May, Pickford and Co.) to our Mr. Schiller, the former declines to take charge on behalf of the Firm of Messrs. May, Pickford and Co., of any office connected with the scheme.

3. The second part of your letter will be duly communicated to Mr. Forde.

From M. R. SCOTT, Esq., Secretary, Indian Tramway Company Limited, London, to MESSRS. J. BORRADAILE AND Co., Calcutta,—(dated 12th March 1862.)

I AM desired by the Directors of the Indian Tramway Company Limited to address you upon the important subject of introducing Tramways into India to be worked by Cattle or light Locomotive according to circumstances, and to request the favor of your Firm acting for this Company in conjunction with Messrs. May, Mathewson and Co., of your city to form a Committee in Calcutta with powers to add thereto.

The Directors having reserved a proportion of the shares for India will be obliged by your Committee advertising the Company in accordance with the memorandum attached to the enclosed Prospectus, viz., No. 1 twice in the principal papers; No. 2 four times, and No. 3 six times, on such dates and at such periods as may be deemed advisable.

The *Friend of India* to advertise every week No. 1 for three weeks; No. 2 for four weeks, and No. 3 for six weeks, if such be deemed advantageous by the Committee. The Prospectus should be re-printed at Calcutta with the local adaptation as shewn.

You will be good enough to note that the responsibility of the Subscribers is limited to the amount of the deposit of one Rupee per share, which is sufficient for all the purposes required at present, and that as soon as the arrangements with the Government of India are completed, the Shareholders will have the option of taking all or any portion they may please of the shares, or of withdrawing altogether, if so disposed, from the procedure of the undertaking.

The Government of India, as you will see by the enclosed extract from the papers of the 8th instant, have already admitted the necessity of these Tramways or light Railways, and the Directors are satisfied that they will confer great benefits upon the country and the people, and prove highly remunerative to those who embark in them.

The Board will be obliged by your reporting from time to time for their guidance the number and particulars of the application which the Committee may receive.

With the re-printed Prospectus altered so far as the adaptation to your locality, should be printed for issue separate "forms of application," also adapted to your locality as shewn in those now sent you as model.

NOTE.—No. 3 Memorandum will be sent next Mail.

From M. R. SCOTT, Esq., Secretary, Indian Tramway Company Limited, London, to MESSRS. MAY, PICKFORD AND Co., Calcutta,—(dated 18th March 1862.)

I AM desired by the Board of Directors of the Indian Tramway Company Limited, to address you upon the important subject of introducing Tramways into India to be worked by Cattle or light Locomotive Engine-power according to circumstances, and to request the favor of your Firm acting for this Company in conjunction with Messrs. John Borradaile and Co. of your city to form a Committee with powers to add thereto in Calcutta.

The Directors having reserved a proportion of the shares for India will be obliged by your Committee advertising the Company in accordance with the memorandum attached to the accompanying Prospectus, viz., No. 1 three times in the principal papers of your locality; No. 2 six times in the same papers on alternate days, or on such dates and at such periods as may be deemed most judicious for effectually ventilating the Company.

The *Friend of India* to advertise every week until the list be closed, if such be approved by the Committee.

The Prospectus should be re-printed at Calcutta with the alterations and local adaptations as shewn on the one now sent as a model.

You will be good enough to note that the responsibility of the Subscribers is limited to the amount of the deposit of one Rupee per share, which is sufficient for all the purposes required at present, and that as soon as the arrangements with the Government of India are completed, the Shareholders will have the option of taking all or any portion of the shares subscribed for, or of withdrawing altogether from the procedure of the undertaking, if so disposed.

The Government of India, as you will see from the enclosed extract from the papers of 8th and 15th instant, have already admitted the necessity of these Tramways or light Railways, and the Directors are satisfied that they will confer great benefit upon the country and the people, and prove highly remunerative to those who embark in them.

The Board will be obliged by your reporting as early as you can for their guidance the number and particulars of the applications and the amount of deposits received, and they recommend the list being closed within one month after the advertisement appears, unless your Committee think it necessary to extend the time.

The advertisement should appear as soon as possible, and for this purpose duplicate copies are forwarded; No. 1 is the whole Prospectus as adopted by your Committee; No. 2 as sent when adopted also.

The Board have no doubt of your Committee being able to engage the services of an Honorary Secretary who would look to the future remunerative employment when the Company (as it is believed it will at an early date) commence active operations. At the outset specially the Board are anxious that the expenditure should be as moderate as possible, and beg your friendly attention to this point.

From G. ADIE, Esq., to F. SCHILLER, Esq.,—(dated 21st April 1862.)

I HAVE now gone through the papers sent by the Tramway Company, and am confirmed in my opinion that it will not suit us to be upon local Committee. I was glad to learn that you had got a suitable person to act as Honorary Secretary, and as your Firm is accustomed to such business, I am sure it could not have fallen into better hands.

I shall write to the Secretary of the Tramway Company by this Mail, letting him know that you are willing to float the scheme here, and that I am sorry we cannot assist in the operation.

Herewith you have copy of the letter received by us last Mail from the Tramway Company, with the enclosure in same. Their letter to you I fancy was to the same effect, but a copy of ours is sent, in case it may contain any particulars not included in yours.

From LIEUTENANT-COLONEL R. STRACHEY, R. E., Secretary to Government of India, Public Works Department, to Agents and Secretaries to the Indian Tramway Company Limited,—(No. 2274, dated 16th June 1862.)

In returning the documents noted in the margin, which

From Secretary to the London Board of the Indian Tramway Co., dated 12th March 1862, addressed to Messrs J. Borradaile and Co.

From Secretary to the London Board of the Indian Tramway Co., dated 16th March 1862, addressed to Messrs. May, Pickford and Co.

From G. Adie, Esq., to Mr. Schiller.

I am directed to state that the matters submitted by you for the consideration of the Governor General in Council will be dealt with as early as possible.

From MESSRS. J. BORRADAILE AND COMPANY, Agents and Secretaries, Indian Tramway Company Limited, to Secretary to Government of India, Public Works Department,—(dated 24th June 1862.)

In continuation of our letter of 2nd instant, and with reference to what passed at the interview with which His Excellency the Viceroy honored a deputation of the Local

Board and Mr. Forde, the Engineer of the Company, we are directed by the Board to intimate, for the information of His Excellency, that Mr. Forde has proceeded to make a personal inspection of the following lines, viz. :—

Chogdah to Jessore via Bongong	... 50 miles.
Kishnaghur to Bugoola	... 11 "
Chandpoor to Kissengunge	... 20 "
Caragola Ghat to Purneah	... 30 "
Hadjeepoor to Moozufferpoor	... 35 "

Should Mr. Forde's opinion of the suitability of these lines for the establishment of Tramways confirm the favorable opinion entertained of them by the Local Board, the Board will be prepared to recommend their immediate construction to the Directors in London.

His Excellency is however aware that these lines cannot be undertaken without the grant of certain concessions. The enterprise is novel in this country, and though it is possible that after two or three lines are in successful working, others may be undertaken on terms less advantageous to the projectors, it is believed that at the outset it will not be possible to raise the required capital (in the absence of a guarantee), unless the undertaking should promise great advantage to the subscribers. The Local Board, therefore, venture to hope that the whole of the concessions, indicated in our letter of 2nd June, may, in the case of these lines be granted.

As regards protection against competition, however, we are instructed to state that the Local Board considers the qualified guarantee given by the Government of India on the case of a similar scheme as contained in your predecessor's letter of * * *, would be sufficient. Less importance would be attached to this condition, but that the bulk of the capital of the undertaking has to be raised in England, where competing lines have so largely contributed to the unprofitable working of many Railways, and where in consequence Shareholders are naturally anxious to be protected against similar competition.

As it is highly important, in view of the commencement of operations during the ensuing cold season, that the Company should at the earliest date be furnished with the decision of the Government of India as to the required concessions, we hope to be favored with an early reply. Mr. Forde will, if possible, leave for England by the first July Steamer.

We have not the date before us.—J. B. and Co.

From MESSRS. J. BORRADAILE AND Co., Agents and Secretaries, Indian Tramway Company Limited, to Secretary to Government of India, Public Works Department,—(dated 19th July 1862.)

With reference to your letter dated 27th June, we have now the honor to inform you that Mr. Forde has personally inspected the following lines for a Tramway, viz. :—

Caragola to Kissengunge,	30 miles.
Hadjeepoor to Moozufferpoor,	35 miles.

His opinion is favorable to the construction of Tramway thereon, and the Local Board is prepared to recommend their immediate construction to the Directors of this Company in London, provided His Excellency the Viceroy will grant the concessions referred to in our letter to you, dated 2nd June.

From LIEUTENANT-COLONEL R. STRACHEY, B. E., Secretary to Government of India, Public Works Department, to Officiating Secretary to Government of Bengal, in the Public Works Department,—(No. 3618, dated 18th September 1862.)

I HAVE the honor, by direction of His Excellency the Governor General in Council, to inform you that the Government of India has recently had under its consideration certain proposals made by the Indian Tramway Company, relative to the construction of light Branch Railways in the Bengal Presidency, which have resulted in offers in behalf of the Company to place rails on the roads from Caragola Ghat to Purneah, and from Hadjeeppoor opposite Patna to Mozufferpoor in Tirhoot.

2. In dealing with these proposals the Governor General in Council has been guided by the general considerations explained at length in my letter No. 3609 of this date, relative to the proposals of the Indian Branch Railway Company, and it will now only be necessary to inform you that the enclosed draft contains the conditions which the Government of India would be prepared to accord to the Tramway Company, should the Lieutenant-Governor desire to support these specific projects.

3. All the cautions contained in my letter abovenamed will be applicable in the present case, and I am directed to request the Lieutenant-Governor's consideration of the whole subject, and that the Government of India may be favored with any observations he may desire to offer on it.

4. With reference to these proposals, I am to remark that no definitive offer, binding on the Company, has yet been made, nor is their Agent authorized to enter into any final contract.

From LIEUTENANT-COLONEL R. STRACHEY, B. E., Secretary to Government of India, Public Works Department, to Agents and Secretaries, Indian Tramway Company Limited,—(No. 3619, dated 18th September 1862.)

IN reply to your letters dated the 2nd, 10th, and 27th June and 19th July last, making proposals regarding the contemplated operations of the Indian Tramway Company on certain specified roads in Bengal, I am directed to inform you that the Government of that Province has been addressed on the subject, and the terms which His Excellency the Governor General in Council is prepared to accord to the Company have been placed before the Lieutenant-Governor for his consideration. A copy of my letter to the Secretary to Government, Bengal, on this subject, and of the letter referred to therein, is forwarded for your information.

2. His Excellency in Council hopes that the conditions proposed will be acceptable to the Company, and that the promoters of these undertakings will soon find themselves in a position to carry out these works, the successful prosecution of which the Government will look upon as a very important step in the development of the resources of India.

3. The views of the Government of India on the general subject of works of this character have already been explained to you by the Viceroy of the personal interview you had with His Excellency, and what further illustration of them

is necessary will, it is hoped, be found in the letters to the Government of Bengal on this subject.

The special conditions proposed for this Company are in all essentials the same as those for the Branch Railway Company, excepting the 48th, which, in the case of the Tramway Company, is as follows :—

48. If the Company shall not, before the 1st January 1866, or within such further period as the Government may hereafter appoint, complete the works, and provide all necessary rolling stock and other conveniences as agreed upon ;—

Or if after the opening of the line for traffic default be made at any time in the maintenance or working of the line as agreed under these special conditions, and if the Government shall require the Company to remedy the default, nor to maintain or work the line as agreed upon, and if the Company shall not within six months from the receipt of such requisition fully comply with the terms thereof ;—

Or if the Company shall commit any specific breach of covenant as defined in Clause 36 of these special conditions, and shall continue to commit such breach of covenant, or shall not remedy the consequences thereof within six months after they have been required by the Government to cease from such breach or to remedy the consequences thereof ;—

Or if the Company shall commit an act of Bankruptcy ;—

Then the Government may enter and take possession of the line, and of the permanent way and of all the works and machinery fixed to the soil, also of all plans, books, and documents relating to the Railway or its working. The Company shall retain possession of all rolling stock on the line, and of all moveable property whatsoever appertaining to the Railway belonging to the Company (excepting plans, books, and documents), and shall be at liberty to remove the same within a reasonable time, unless the Government shall have claimed to purchase the same, or any portion of them, at a valuation which the Government shall have the option of doing. Nothing so claimed shall be removed or dealt with by the Company.

From LIEUTENANT-COLONEL R. STRACHEY, B. E., Secretary to Government of India, Public Works Department, to Agents and Secretaries, Indian Tramway Company Limited,—(No. 2324, dated 19th June 1862.)

HAVING reference to the conversation that took place at the interview between the deputation from the Indian Tramway Company and His Excellency the Governor General on Tuesday last, I am to request that you will be so good as to favor me with copies of any communications that may have been received from the Governments of Madras or Bombay, on the subject of the operations of the Company.

From MESSRS. J. BORRADAILE AND Co., Agents and Secretaries, Indian Tramway Company Limited, to Secretary to Government of India, Public Works Department,—(dated 27th June 1862.)

IN reply to your letter No. 2324, dated June 19th, we have the honor to enclose copy of a

communication which has been transmitted from Madras to Mr. Forde, the Engineer of this Company; he has received no communication from Bombay so far.

From A. J. ARBUTHNOT, Esq., Acting Chief Secretary to Government, Fort St. George, to Honorary Secretary to the Indian Tramway Company,—(No. 292, dated 3rd June 1862.)

ADVERTING to the proposals which were submitted to His Excellency the Governor by the deputation of the Indian Tramway Company, which waited on His Excellency on the 24th ultimo, and with reference to your letter of the 23rd ultimo, I am directed by the Governor in Council to inform you that the Government of Madras will be prepared to accede to those proposals to the following extent:—

1st.—It will give the land required for the construction of Tramways free of all payment.

2nd.—It will exempt from all payment of duty all materials and machinery that may be imported for the Company's works.

3rd.—It will guarantee the Company for a certain time, to be settled hereafter, against competing lines.

4th.—It will allow the Company to lay their rails upon existing public roads, when these are wide enough to admit of Tramways being constructed on them without interfering with the ordinary traffic, and in cases in which the Government proposes to construct a road, it will be prepared to transfer the construction of such road to the Company, paying to the latter, either at once or by instalments, the amount estimated as the cost of the said road. It will also be prepared to grant to the Company, when one of their lines of rail is laid upon a Government road, a proportion of the amount estimated for its annual maintenance.

5th.—The Government will not interfere with the arrangements of the Company until the profits exceed 15 per cent.

6th.—All payments from the Government will cease as soon as the profits amount to 5 per cent.

7th.—Government will give every information in its possession which may be calculated to aid the Company in carrying on its work.

From LIEUTENANT-COLONEL R. STRACHY, R. E., Secretary to Government of India, Public Works Department, to Secretary to Government of Madras, in the Public Works Department,—(No. 2453, dated 28th June 1862.)

At a recent interview between His Excellency the Viceroy and the Calcutta Local Committee of the Indian Tramway Company, it was mentioned that His Excellency the Governor of Madras had, in reply to an application from the Agent of that Company, named certain terms on which the co-operation of the Government of Madras in the objects of the Company was promised. A copy of the letter in which these terms were stated is now before His Excellency the Governor General in Council, and he directs me to remark that they appear far more favorable than those he would be disposed to accord to offers so vague as those of the Tramway Company, or than the Secretary of State is likely to sanction. His Excellency is of opinion that in proportion as the proposals of a Company are definite, the terms offered by the Government may, in like degree, be liberal; but that indefinite offers on the part of a Company must of necessity be met by extreme caution on the part of the Government. In the former

case the Government of India would be prepared to accord the most favourable terms to encourage Capitalists to come forward to carry out any approved proposal of a definitive character; whereas in the latter case there could be little more said than that the Government would generally be willing to encourage such enterprise, and might be disposed for the present, under ordinary circumstances, to grant the necessary land free of cost. The Government of India has already acted in this sense in dealing with a gentleman who proposed to lay down Rails on a Road in Bengal, and will be ready in like manner to give cordial support to any well considered scheme that the Government of Madras may desire to recommend, within the limits of prudence.

2. His Excellency the Governor General in Council must remind the Government of Madras of the serious financial responsibility that will attend any general promises on the part of the Government to support such undertakings as these, and until some established basis is laid down on which the co-operation of the Government of India can be promised, it will be better that the Madras Government should refer for the approval of the Government of India any proposals of this nature that it may desire to see sanctioned, and that may be likely to involve the outlay of funds not already at its absolute disposal.

Circular No. 62.

Endorsed by P. W. Dept.

Copy forwarded to Local Governments and

Governments of Bombay, Bengal, N. W. P., and Punjab.
Governor, Straits Settlements.
Chief Commissioners, Oudh, Central Provinces, and British Burmah.
Commissioner of Mysore.
Resident at Hyderabad.

Administrations noted in the margin, for information and guidance.

From LIEUTENANT-COLONEL R. STRACHY, R. E., Secretary to Government of India, Public Works Department, to Secretary to Government of Madras, in the Railway Department,—(No. 3611, dated 18th September 1862.)

HAVING reference to former correspondence

noted in margin, on Government of India's No. 2453, the subject of the dated 28th June 1862. Indian Tramway

Company, I am directed to forward, for the information of the Government of Madras, copies of correspondence with the Government of Bengal, and of the conditions approved of by the Government of India for the construction of Branch Railways on certain roads in Bengal.

2. His Excellency the Governor General in Council observes that any agreements in general conformity with those thus approved for Bengal, into which the Madras Government may desire to enter for the construction of specific lines of Railway, will be sanctioned by the Government of India, unless some financial obstacle stands in the way.

3. The Agent of the Tramway Company has specially proposed to take up a line of Railway on the road leading from the Arcot Junction on the Madras Railway to Conjeeveram, a distance of about 22 miles. This proposal the Madras Government will deal with at its discretion.

is within the competence of this Government to sanction, and the Government of India to whom the project would have to be submitted should see fit to disallow the work, of course it would not be undertaken.

6. With this explanation, I am directed to solicit information whether it is the wish of the Supreme Government that this Government should recall the terms already offered to the Tramway Company. They will of course be prepared to refer to the Government of India, as directed in the conclusion of your letter, in respect to any similar applications which may be made from any other quarter hereafter.

From **LIEUTENANT-COLONEL R. STRACHEY, R. E.**, Secretary to Government of India, Public Works Department, to Chief Secretary to Government of Madras, in the Railway Department.—(No. 3762, dated 26th September 1862.)

Your letter No. 460, dated 25th August, having been submitted to His Excellency the Governor General in Council, I am directed in reply to observe that, after the full exposition of the views of the Government of India relative to the nature of the arrangements that in its estimation might properly be made with the Tramway Company, contained in the correspondence sent to the Madras Government with my letter No. 3641, dated 18th September 1862, His Excellency in Council believes that no further general discussion of these matters will now be necessary.

2. At the same time, with reference to the observations contained in your letter under acknowledgment, I am to remark that the Government of India continues to consider it to have been unadvisable that general pledges, including a guarantee against competing lines, should have been given to any one Company, as such pledges might hamper the Madras Government in the event of more favorable terms being proposed at any future time and for any special project, from any other quarter.

3. The Agent of the Tramway Company, however, having now referred his specific proposals regarding the projected lines in the Madras Territory to the Governor General in Council, it may be understood that his direct communications with the Government of Madras have not been looked on by him as conclusive, and no further action seems called for in reference to Mr. Arbutnot's letter No. 292, dated 3rd June last.

From **MAJOR-GENERAL W. SCOTT**, Secretary to Government, Bombay, to **A. W. FORDE, Esq.**, Agent and Engineer, Indian Tramway Company.—(No. 3976, dated 8th July 1862.)

I AM directed by His Excellency in Council to acknowledge the receipt of your letter dated 30th April 1862, with accompaniments, explaining the wishes of the Company you represent, the particular lines of road which are deemed most likely to prove remunerative, and soliciting an expression of the views of this Government in the belief that thereby delay and references will be avoided, and the way cleared for the early commencement of the Company's works.

In reply, I am to inform you that His Excellency in Council views favorably the general object of the Company you represent, and considers the lines upon which you propose to commence operations judiciously selected. I am to add with regard to the line last, on the list, that an application by

other parties—to construct a Tramway along it—had been received by Government previous to the date of your letter under acknowledgment.

The terms which the Company ask are—

1st.—A free grant of land required.

2nd.—A remission of Customs duty on import of materials.

3rd.—A protection against competition.

4th.—An audit of the Company's Accounts by Government.

5th.—That there be no interference with profits until they reach 15 per cent. per annum.

6th.—That a sum of money be paid at once, or annually, equivalent to the cost of making and maintaining a good road. This subvention to cease on any line of Tramway so soon as it shall have yielded for two consecutive years a net profit exceeding 5 per cent.

The following are the terms on which the Governor in Council would be willing to consider any specific offer to lay down a Tramway on any of the lines you have specified: you are doubtless aware that the actual conclusion of any agreement, after the terms have been finally arranged, would rest, according to the extent of the liability to be incurred, either with the Bombay Government, or with the Government of India, or Secretary of State in Council:—

1st.—That such land as this Government may consider necessary for any sanctioned undertaking shall be made over to the Company gratis.

2nd.—The practice in force with respect to Railway Companies in remitting Custom duties on import of materials shall be held applicable to such imports by the Indian Tramway Company, for the construction of any line which is the subject of agreement.

3rd.—That the Company's Accounts be audited by Government.

4th.—That no interference with the profits derived from working the traffic on any sanctioned line shall take place, unless those profits reach 15 per cent. If profits exceed 15 per cent., a tariff will be introduced which will reduce the profits to 15 per cent.

5th.—That on the completion to the entire satisfaction of this Government of any line of Tramway sanctioned by it, a sum of money shall be paid by Government to the Tramway Company equivalent to the cost of making a good ordinary road along the same line and of the breadth required for a Tramway, that amount being determined by Plans and Estimates previously prepared, either by the Officers of Government, or by the Company, and revised by the Officers of Government; the amount to be paid being specified in the Agreement.

6th.—Should any sanctioned line of Tramway follow the general course of any existing road, and should Government deem it desirable to comply with the request of the Company that the Tramway be laid on that road, such portion of it as shall be deemed necessary may be made over to the Company in lieu of any cash payment for such portion.

7th.—Government to have the option of either paying a capital sum, as provided in the 5th Clause, or interest on such capital sum, at a rate to be fixed in the Agreement, so long as the capital is not paid.

8th.—A right of purchasing the Tramway, or any unfinished portion of it, within a fixed period after